

Rock Products and BUILDING MATERIALS

INCORPORATING DEALERS BUILDING MATERIAL RECORD

Volume XV.

CHICAGO, ILL., MARCH 22, 1915.

Number 10

CAROLINA PORTLAND CEMENT COMPANY

We are the largest distributors of Portland Cement, Lime Plaster, Fire-brick and General Building Material in the Southern States, and have stocks of Standard Brands at all of the Atlantic and Gulf Seaports, and at our interior mills and warehouses, for prompt and economical distribution to all Southern territory. Write for our delivered prices anywhere. Also Southern agents for the "Dehydratine's" waterproofing material. "Universal," "Acme" and "Electroid" Brands Ready Roofing. Get our prices.

Charleston, S. C. Birmingham, Ala. Atlanta, Ga. New Orleans, La.



Phoenix Portland Cement UNEXCELLED FOR ALL USES.
Manufactured by
PHOENIX PORTLAND CEMENT CO.
NAZARETH PA.

Sole Selling Agent, WILLIAM G. HARTMAN, CEMENT CO.
Real Estate Trust Building, PHILADELPHIA, PENNSYLVANIA.

NOW READY DIRECTORY FOR 1915

Cement, Gypsum and Lime Manufacturers
NEATLY BOUND VEST POCKET SIZE

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FRANCIS PUBLISHING COMPANY
537 So. Dearborn St., CHICAGO

FIRE BRICK "MOUNT SAVAGE." None Better
"REFRACTO" thoroughly dependable for
boiler work and general purposes.
FLUE LININGS of FIRE CLAY
IRE PROOFING THERMIC FIRE CLAY
HOLLOW TILE for both partition and outside use.

Union Mining Company

GENERAL OFFICES

1113-1117 Fidelity Building, BALTIMORE, MD.

Manufacturing Plants: Mount Savage, Md.

DO YOU SELL?



WRITE FOR BOOKLET AND PRICES

AMERICAN KEENE CEMENT COMPANY
Sigurd, Utah

SPECIAL FEATURES OF THIS NUMBER

Team Work in Selling	- - - - -	Page 22
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Giant BELT for Your Drives
Granite BELT for Your Elevators
Supremo BELT for Your Conveyors

WHY? ASK US.

Revere Rubber Co.

BOSTON NEW YORK CHICAGO NEW ORLEANS PHILADELPHIA

THE CONCRETE HOUSE AND ITS CONSTRUCTION

SAFETY AND PERMANENCE



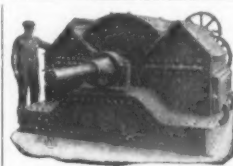
DO NOT BE AFRAID CONCRETE CAN NOT BURN

We have some excellent pamphlets for Free distribution informing you how to best construct of "Concrete for Permanence," also a handsomely illustrated 224 page book.



The Concrete House,
Price \$1.00

VULCANITE PORTLAND CEMENT CO.
Philadelphia - New York



"PENNSYLVANIA"

Hammer Crushers For Crushing and Pulverizing Lime, Limestone, Gypsum, Marl, Shale, Etc.

Main Frame of Steel, "Ball and Socket" self aligning Bearings; forged Steel Shaft; Steel Wear Liners; Cage adjustable by hand wheel while Crusher is running.

No other hammer Crusher has such a big Safety Factor.

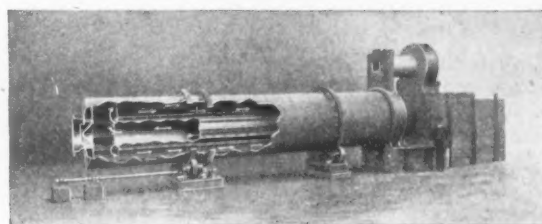
Pennsylvania Crusher Co.

New York PHILADELPHIA Pittsburgh

BACON & FARREL
ORE & ROCK
CRUSHING - WORLD KNOWN
ROLLS-CRUSHERS

EARLE C. BACON, ENGINEER
HAYEMEYER BUILDING, NEW YORK

SPECIALISTS IN THE DRYING FIELD FOR THE LAST 16 YEARS



Section showing direction gases pass thru the dryer.

RUGGLES-COLES "DOUBLE SHELL" DRYERS

are used in all parts of the world, there being more than 400 installations. Over half a hundred are used for drying sand and gypsum at plaster, brick and cement plants.

We build six regular types of dryers, but for special work we build machines to order.

Book "What We Dry" will interest you.

Ruggles-Coles Engineering Co.

CHICAGO OFFICE
McCormick Building

50 Church Street
NEW YORK

Daily Capacity
7000 Barrels



The Quality
Cement of the
Middle West

MORE THAN FIFTEEN YEARS OF SATISFACTION

THREE PLANTS: ALPENA - DETROIT - WYANDOTTE

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Water and Rail Facilities Best Serve the
Entire Middle West

EVERY BARREL TESTED AND GUARANTEED. SOLD BY THE BEST DEALERS EVERYWHERE

Main Office: 1525 Ford Bldg., Detroit, Michigan

Daily Capacity
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The Leading
Concrete
Cement

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS

Here are the Men Who put the Workability in Ajax Wagons

There isn't a guess in Ajax Dump Wagons.

They are designed and built by capable engineers.

These five men, at the head of our Engineering Department, have made it possible for us to name one hundred and thirty definite reasons for the superiority of Ajax Wagons.

One of these men has spent his life in the field as a contractor on a big scale. He knows what contractors want in Dump Wagons.

Another spends his time in the field, figuring costs and finding ways to reduce hauling expense.

Another is a Mechanical and Civil Engineer with 20 years' experience in vehicle design. He knows how to design a good Dump Wagon.

Another has been building Troy Wagons for a quarter of a century. He knows what must go into good Dump Wagons.

Another is an Efficiency Engineer who makes the best wagon with the best materials at the lowest cost of production.

The knowledge, skill and practical experience of these men and their assistants go straight into Ajax Dump Wagons for your benefit—for long, hard, profitable service, for the elimination of repairs, for workability under any conditions that a good Dump Wagon has to meet and master.

Troy Wagons have always been good. The new Ajax, with arched rear axle, interchangeable steel and wooden doors, etc., is Today's wagon, to meet Today's severe requirements. Write for the Ajax Point Chart 2-RP and the major reasons for Ajax superiority.

The Troy Wagon Works Company TROY, MIAMI COUNTY, OHIO

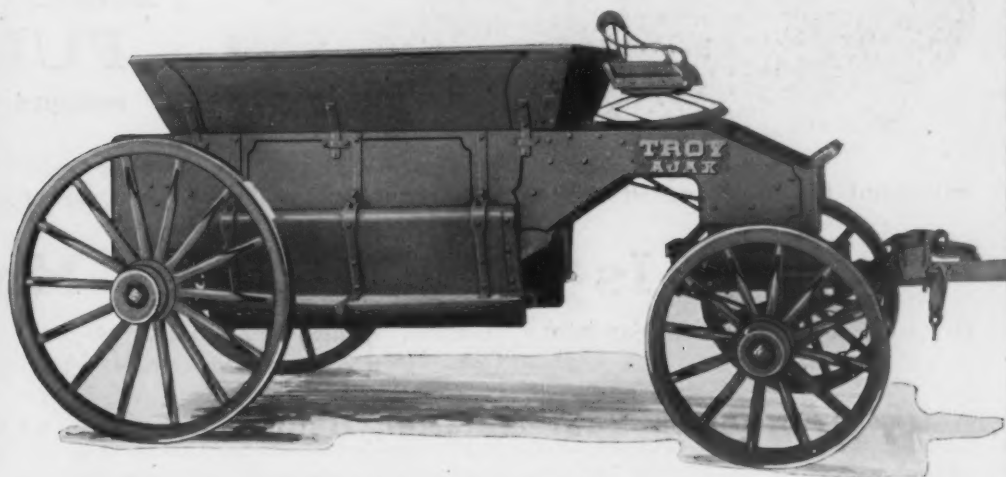
NEW YORK CITY
50 Church Street

DETROIT
319 Hammond Bldg.

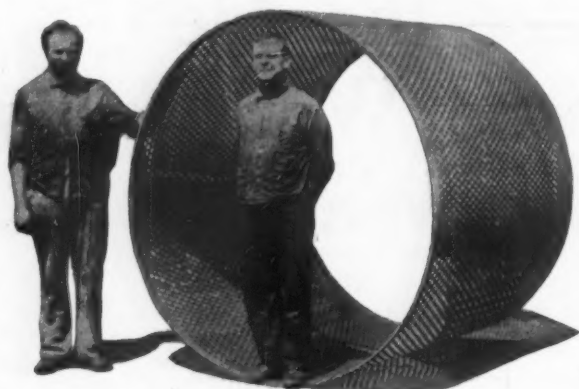
PHILADELPHIA
702 Abbott Bldg.

CHICAGO
900 Lytton Building

LONDON, ENG.
49 Pall Mall



Troy Dump Wagons Reversibles
Farm Wagons Trailers



**Screen Sections
AND Dust Jackets
FOR
Revolving Screens**

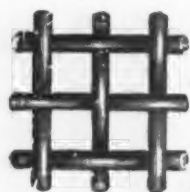
Made accurately to size to fit all makes and sizes of screens.

**Conical Screen Shells
A Specialty—for
Gravel Washing Plants**

**Flat Screen Plates—Everything
In Screens For Crushed
Stone, Gravel, Sand, Clay, Etc,**

QUICK SHIPMENTS

OUR ENTIRE ATTENTION IS DEVOTED TO THIS WORK. PRICES RIGHT.

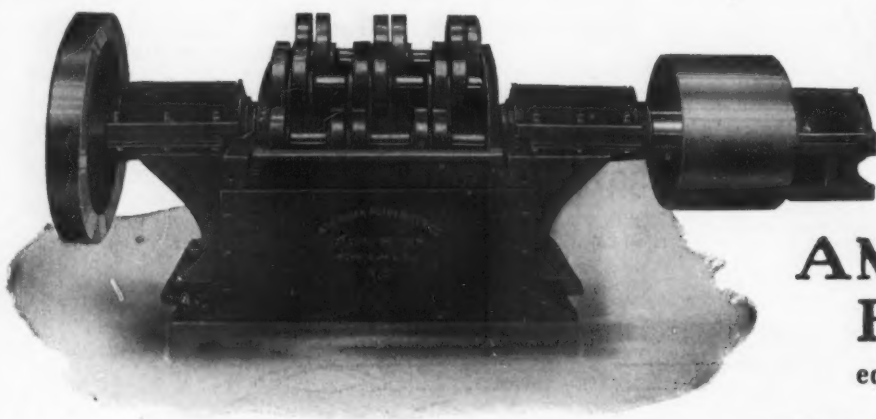
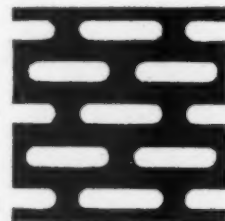


Sole manufacturers of the O'Laughlin Revolving Screen.
The best screen made for crushed stone.

JOHNSTON & CHAPMAN CO.

2929 Carroll Avenue

CHICAGO



INVESTIGATE!

You will find the

**AMERICAN RING
PULVERIZER**

equipped with the best and most steel.

That it is the strongest machine. That it will withstand the most rugged work and do more work, with less speed, power and operating cost per finished ton.

It Is the Cheapest Machine

to crush and pulverize Sandstone, Gravel, Limestone, Quartz, 80% Ferro-Manganese, Slag, Brick Bats, Coke, Pyrite Iron Ore, Shale, etc.

Describe Your Material, Hourly Tonnage and Screen Fines

—SEND FOR CIRCULAR—ASK QUESTIONS—

AMERICAN PULVERIZER COMPANY = East St. Louis, Ill.

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS

Another Large Cement Company Has Adopted Our New Mill

The Bradley Hercules

THIS makes five cement companies who have decided against high pulverizing costs. This Bradley Hercules Mill means something to every cement plant now using ball mills or kominuters for preliminary pulverizing with an output of 3000 barrels per day or more. Small plants will not be interested as this wonderful mill has a capacity of 100 barrels and over per hour when pulverizing clinker and from 30 to 45 tons of limestone, using about 200 H. P.—pulverizing to a fineness of 50% through a 100 mesh sieve.

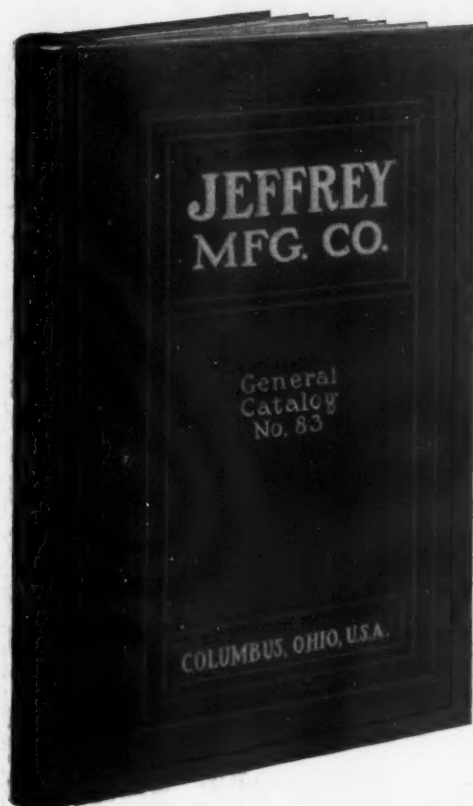
This is a big mill designed to do big things. It takes for feed material of a size that is produced by the No. 4 or No. 5 Crusher and reduces it to an ideal tube mill feed, thereby eliminating intermediate pulverizers. **It simplifies grinding and cuts costs to an unbelievable point.** Weighs 45000 lbs.

Investigation is Invited—List of Installations Upon Request

Bradley Pulverizer Company, Boston, Massachusetts

MANUFACTURERS OF

THE GIANT GRIFFIN MILL—THE ONLY SUCCESSFUL SINGLE STAGE MILL



Use This Book as Your Guide In Preparing Plans For Future Work

The JEFFREY GENERAL CATALOG For 1915

contains 384 pages of Concise, Accurate and Interesting Description and Data, together with numerous Photographic Illustrations showing Equipments in actual service.

You will be particularly interested in the following line of Machinery, which we design and manufacture especially for Contractors' use.

CRUSHED STONE ELEVATORS and CONVEYERS

of rugged and enduring construction; for both small and very large capacities.

PULVERIZER and SCREENING EQUIPMENTS,

which size your stone to the trade's demand. Our Pulverizers make Road Top Dressing to meet the requirements of the Commissioners, and also Powdered Limestone that enriches farm soils for better crops.

POWER TRANSMISSION MACHINERY.

The very outfit to meet your conditions for reducing operating expenses and increasing your output is no doubt pictured in this book, sent free to those interested in JEFFREY PRODUCTS upon receipt of Coupon properly filled out.

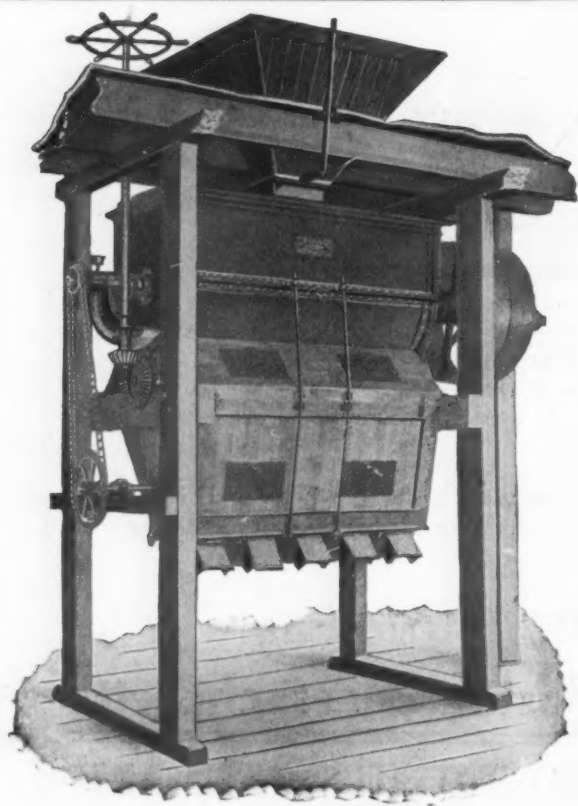
JEFFREY MFG. CO., 935 North Fourth Street, COLUMBUS, OHIO

Please send copy of General Catalog No. 83.

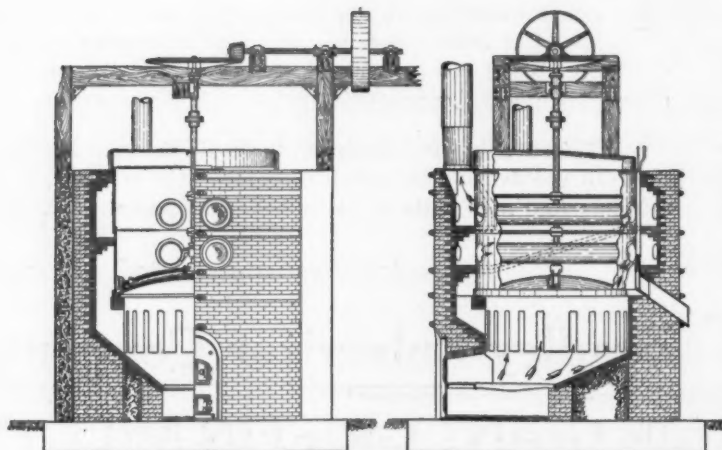
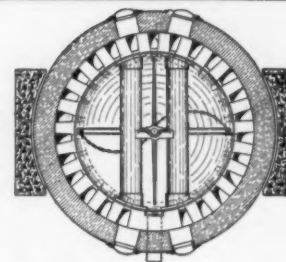
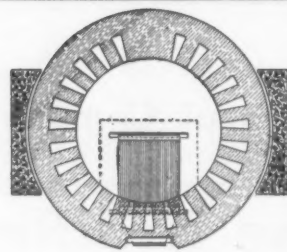
NAME.....

ADDRESS..... (3-22-15)

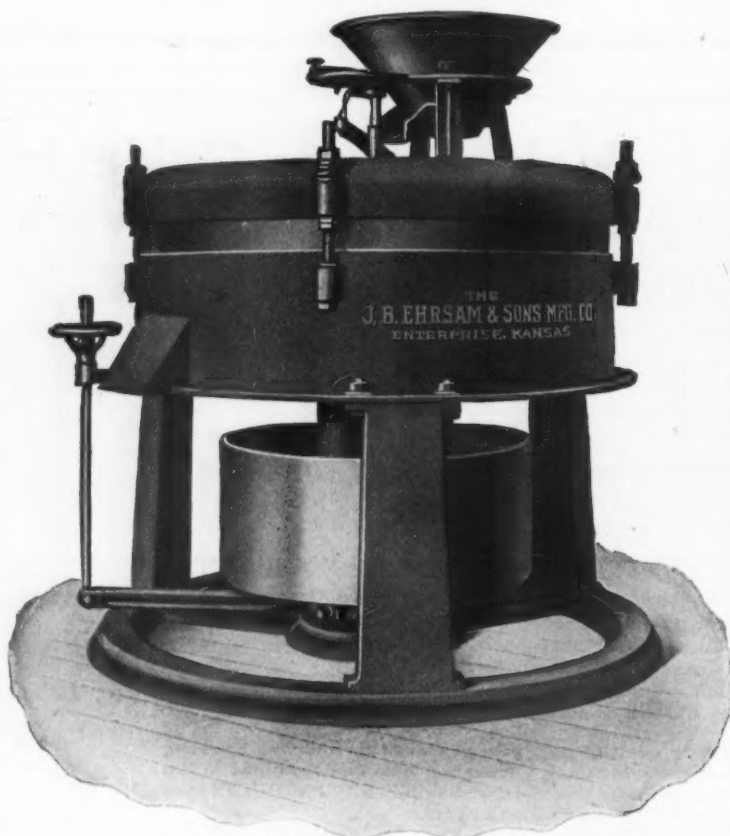
Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS



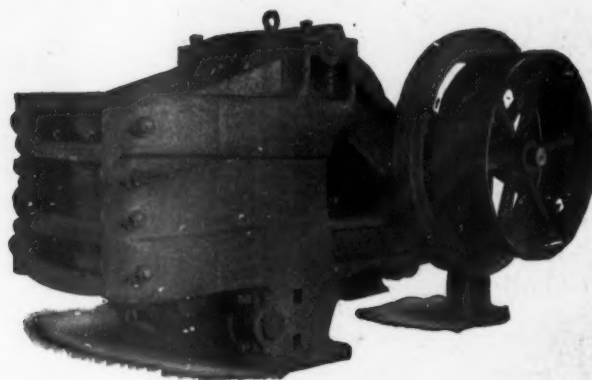
Enterprise Noiseless Mixer



Ehrsam Calcining Kettles—Built in 5 sizes—6-8-10-12-14 feet in diameter, having capacity of from 3 tons to 20 tons to the charge



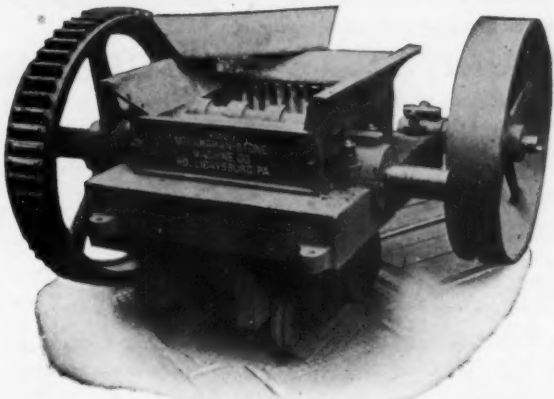
Horizontal and Vertical Heavy Duty Grinding Mills



Jaw Crushers Built in all sizes up to 24" x 34" jaw opening. Rotary Fine Crushers in sizes up to 42" inside diameter.

The J. B. Ehrsam & Sons Mfg. Co., ENTERPRISE, KANSAS
Manufacturers of Plaster Mill Machinery, Conveying, Elevating and Power Transmission Appliances

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OUR SINGLE ROLL CRUSHER IS AS SIMPLE AS CAN BE

Is easily fed, makes less fines than either a Gyratory or Jaw. Capacity 5 to 500 tons per hour. For crushing Limestone, Dolomite, Hard Rock Phosphate, Cinders, Etc. Screens of all descriptions. Washers for dirty stone.

Ask for Information

McLANAHAN-STONE MACHINE CO., Hollidaysburg, Pa.

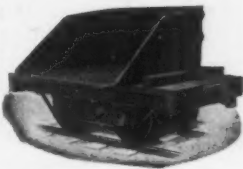
QUARRY AND ROCK CARS

TRADE MARK



High grade cars of all standard types or special designs are manufactured by us. We can cite several installations of interest to any one handling rock.

**The Kilbourne & Jacobs
Mfg. Co.
COLUMBUS, OHIO**



THE DISCS OF THE SYMONS DISC CRUSHER

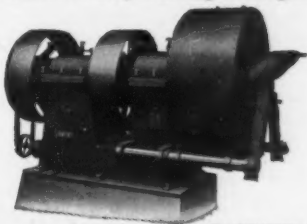
Are made of manganese steel. They revolve in the same direction at the same speed. The inner disc has a vibrating motion which produces a nipping action. Doing away with the excessive abrasion found in other types of crushers.

Large Capacity — Economical — Less Power per Ton

MANUFACTURED AND SOLD ONLY BY

Chalmers & Williams

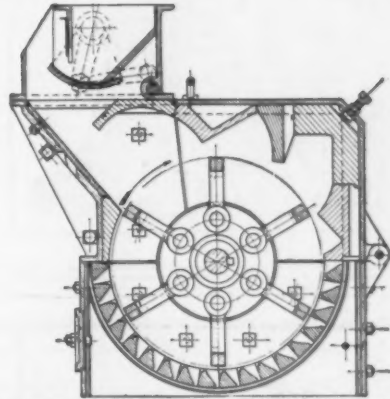
1450 Arnold St., Chicago Heights, Ill.



PATENTED

EVENTUALLY — SYMONS DISCS

Pulverators



Cross Section of Allis-Chalmers Pulverator (Patented)

Pulverizing

by a New Principle

**Note that Involute Curve
The Direction of Rotation**

Advise us your requirements concerning capacity and fineness wanted

Forward Sample of Your Material

**Complete Rock Crushing Plants and Cement Mills—
Power Plants—Electric Motors**

**Allis = Chalmers
Manufacturing Company**

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Huerfano 1157, Casilla 2653, Santiago, Chile. H. I. Keen, 733 Salisbury
House, London Wall, E. C., London, England. American Trading Co., Repre-
sentative in Japan, South America, China and Philippine Islands. Herbert
Ainsworth, Johannesburg, So. Africa.



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For underground masonry, cisterns, reservoirs, pits, coal and grain pockets.

Watertight, sanitary, hard and dustless floors.

Used with sand and cement to produce a waterproof mortar which will bond perfectly to new or old masonry and permanently waterproof, even if plastered on the inside of a cellar, where the water pressure is outside.

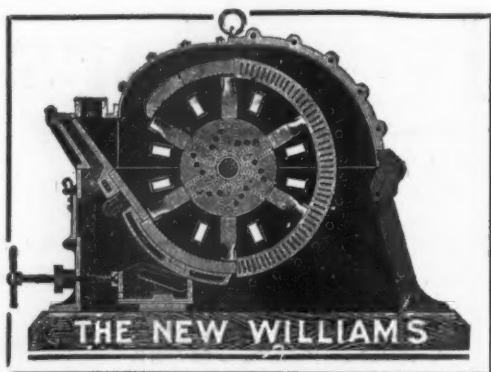
Hercules Colored Coatings; Plaster-bond and Damp-proofing Mastic.

WATERPROOFING

HERCULES WATERPROOF CEMENT CO.

BUFFALO, NEW YORK

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Without Screening or Separating
THE WILLIAMS UNIVERSAL FINE GRINDER
 on dry limestone will produce a product
95%—30 Mesh—60%—100 Mesh

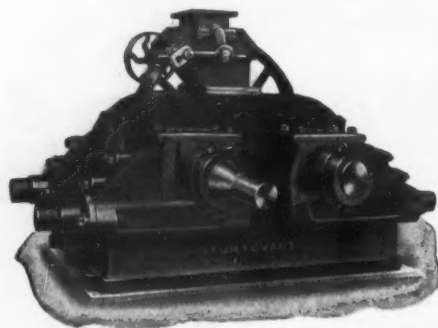
The Williams New Universal Fine Grinder is the only machine having a really adjustable grinding plate. This adjustable plate insures uniformity of product at all times, minimizes repairs, and lengthens the life of hammers fully 50%, allowing from 2½" to 4" more wear off the hammers than would otherwise be possible.

The Williams New Universal Fine Grinder will take 1½", 2", 2½" Dry Limestone and in one operation without the use of screens or separators produce a uniform fine product, something no other machine on the market can accomplish. It will do this with the minimum expense for maintenance and power.

Detail description and illustrations of this machine will be found in our Catalog No. 4, which will be sent to all interested parties on request. Investigate this machine NOW—it will be worth your while. A statement from you as to nature of material to be handled, original size, size product desired, and quantity per hour will enable us to make proper recommendations.

The Williams Patent Crusher & Pulverizer Co.

Works: St. Louis, Mo. General Sales Dept.—Old Colony Bldg., Chicago, Ill. San Francisco: 268 Market St.



STURTEVANT MACHINERY

CRUSHERS

GRINDERS

SCREENS

Thirty Years of Practical Experience has taught us that no one machine is adapted to all purposes. Customers expect correctly designed machines for their special work. Our large line enables one to select properly. It consists of:

CRUSHERS—For coarse, medium and fine work on hard or soft rock. Jaw,

Rotary and Hammer design.

CRUSHING ROLLS—Coarse, medium and fine. Hard or soft rock,—wet or dry.

TRI-ROLL MILLS—For medium crushing, giving Two Roll Reductions.

RING-ROLL MILLS—For pulverizing hard materials.

EMERY MILLS and HAMMER-BAR MILLS—For pulverizing softer materials.

SCREENS—Inclined Vibrating and Rotary for fine or coarse work—wet or dry.

Sampling Crushers, Rolls, Grinders and Screens.

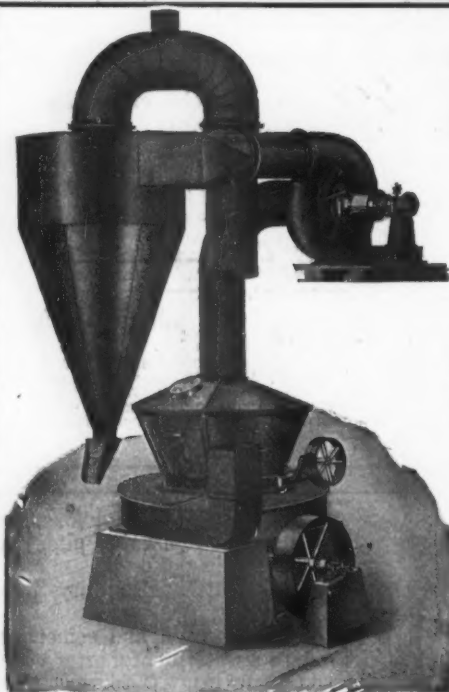
Send for Catalogue.

STURTEVANT MILL CO., BOSTON, MASS.

NEW YORK CHICAGO

DENVER PITTSBURGH

VICTORIA, B. C. LONDON ENG.



Getting Things Done at Low Cost Which Cannot be Otherwise Done at Any Cost

One of the chief elements of success of the

RAYMOND PULVERIZING-AIR SEPARATING SYSTEM

has been not merely its ability to lower costs of production in grinding and separating operations, but that it is able to solve difficulties of production which cannot be met by any other known process.

For instance, the reason why the Raymond System has become standard in the production of Hydrated Lime is that it automatically separates and eliminates impurities.

This is absolutely essential to producing a first-class material and the enormous development of the use of Hydrated Lime would probably never have occurred without the solution of this problem.

And that's only one instance in scores, of "Raymond" adaptability.

If you are thinking of the Raymond System as simply a mill for fine grinding you are overlooking a lot of its advantages.

It might be worth your while to know what advantage the Raymond System could produce for you. It's easy to find out.

Raymond Bros. Impact Pulverizer Company

1301 No. Branch Street, CHICAGO, ILL.

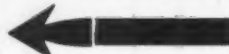
Please send us your book on Modern Methods of Pulverization.

NAME.....

STREET.....

CITY.....STATE.....

SEND FOR THE



**RAYMOND
BOOK NOW**

We design special machinery and methods for Pulverizing, Grinding, Separating and Conveying all powdered products. We manufacture Automatic Pulverizers, Roller Mills, Vacuum Air Separators, Crushers, Special Exhaust Fans and Dust Collectors. Send for the Book.

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AUSTIN GYRATORY CRUSHERS

Made in Eight Sizes

50 to 5000 Tons Per Day

Plans and Specifications submitted and expert advice free on any problems involving rock-crushing or earth-handling.

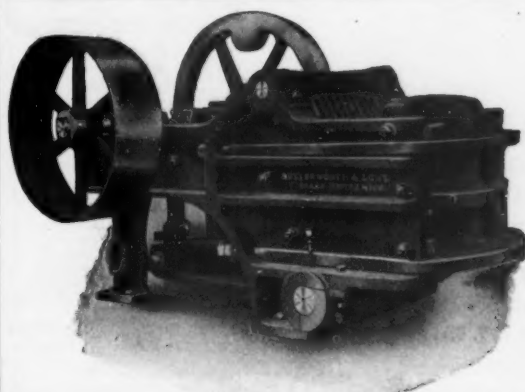
AUSTIN MANUFACTURING CO.

New York Office: 50 CHURCH STREET

CHICAGO

Canadian Agents: MUSSENS, Ltd., Montreal

We manufacture:—Road and Elevating Graders, Scarifiers, Road Rollers, Quarry Cars, Dump Wagons, Stone Spreaders, Street Cleaning Machinery.



Jaw and Rotary CRUSHERS

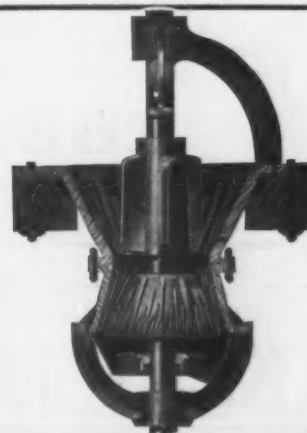
For all Rocks and Ores Softer than Granite

GYPSUM MACHINERY—We design modern Plaster Mills and make all necessary Machinery, including Kettles, Nippers, Crackers, Buhns, Screens, Elevators, Shafting, etc.

Special Crusher-Grinders for Lime

Butterworth & Lowe
17 Huron Street, Grand Rapids, Mich.

Nippers—17 x 19", 18 x 26", 20 x 30", 24 x 36" and 26 x 42"



Crackers—6 sizes—many variations.



The Grinding is Finished in one Operation

All working parts can be removed and replaced without disturbing belts, feeder, etc.

BONNOT PULVERIZER

Grinds and Screens Limestone, Raw Lime and Hydrated Lime

Does it at One Operation. Gives You Any Desired Fineness

GRINDING LIME IS LARGELY A SCREENING PROPOSITION. THE BONNOT PULVERIZER HAS THE LARGEST SCREENING SURFACE AND CONSEQUENTLY THE GREATEST CAPACITY.

NO OTHER MACHINE LIKE IT IN THE ACCESSIBILITY OF SCREEN AND GRINDING PARTS.

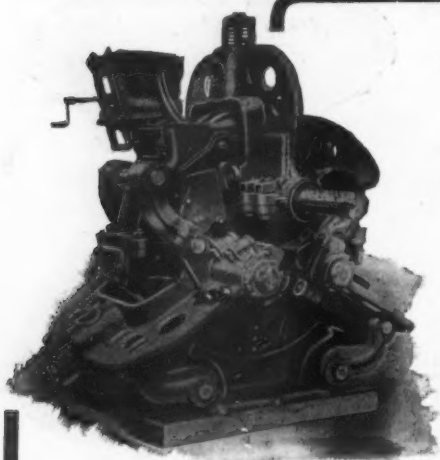
No. 4 Catalog Explains These Advantages

THE BONNOT COMPANY

909 N. Y. Life Bldg.
KANSAS CITY, MO.

CANTON, OHIO

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS



MAXECON

Means MAXimum of ECONomy

Years of experience with the assistance of our hundreds of customers has found THE SOLUTION OF GRINDING HARD MATERIALS. The MAXECON PULVERIZER combines highest EFFICIENCY, greatest DURABILITY and assured RELIABILITY, Uses the LEAST HORSE POWER per capacity. Embodies the features of our Kent Mill with improvements that make it MAXECON.

WE DO NOT CLAIM ALL of the CREDIT for this achievement

We have enjoyed the valuable suggestions of the engineers of the Universal Portland Cement Co. (U. S. Steel Corp.), Sandusky P. C. Co., Chicago Portland C. Co., Marquette Cement Mfg. Co., Western P. C. Co., Cowham Engineering Co., Ironton P. C. Co., Alpena P. C. Co., Castalia P. C. Co., Pennsylvania P. C. Co., and many other patrons.

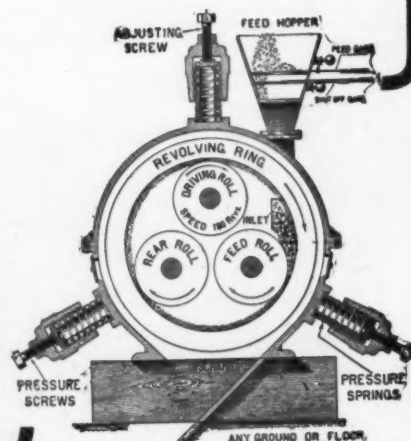
THE RING WOBBLES

The FREE WOBBLING POUNDING RING instantly and Automatically ADAPTS its position to the variations of work.

Its GRINDING ACTION is DIFFERENT than any other; besides the STRAIGHT rolling action of the rolls, the SIDE to SIDE motion of the ring makes the material subject to TWO crushing forces and DOUBLE OUTPUT results.

KENT MILL CO.

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LONDON, W. C., 31 HIGH HOLBORN
BERLIN-HOHENSCHOENHAUSEN



JUST A CHANGE IN OFFICE ADDRESS

We assure you the same prompt service and excellent quality of product

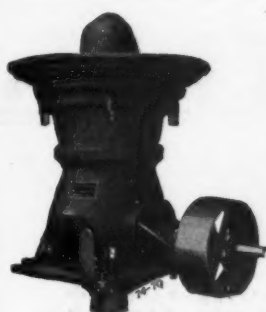
Eastern Plant
PORT CLINTON
OHIO



Western Plant
WEBSTER CITY
IOWA

THE NATIONAL RETARDER COMPANY
930 North Halsted Street, CHICAGO, ILL.

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McCully Gyratory Crusher

has perfect suspension for main shaft, removable countershaft bearing and steel gears.

Efficient oiling devices, great strength and simple construction give a perfect rolling motion that minimizes power consumption and possibility of breakage. Described and illustrated in Bulletin PM-4-58.

Rock Crushers

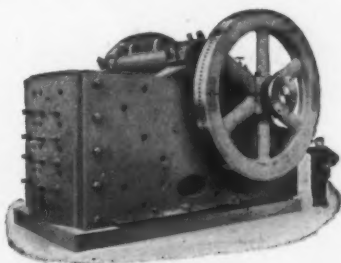
The largest crusher in the world operating on trap rock is a

Superior Jaw Crusher

Installed March, 1910, in the quarries of the Birdboro Stone Co., Birdboro, Pa. It produces 3500 to 4000 tons per day.

Built in the following Receiving Opening Sizes: 36"x24"; 42"x40"; 60"x48"; 84"x60". Described in Bulletin PM-4-58.

Write for Bulletin.



Power & Mining Machinery Co.

Works: Cudahy, Wis. New York Office: 115 Broadway

District Offices: Chicago, El Paso, San Francisco, Atlanta.

PRINCIPAL PRODUCTS

Rock Crushing Machinery, Mining and Smelting Machinery, Cement Making Machinery, Wood Impregnating Plants, Locomotive Gas Generators, Suction Gas Producers, Cyanide and General Steel Tank Works, Woodbury Jigging System, Lead Burning. M-277.2

HOISTING rope of every description for elevators, mines, coal hoists, ore hoists, conveyors, derricks and cranes, stump pullers, steam shovels, dredges, skidder rope for logging, ballast, unloading. Towing hawsers, mooring lines, tiller rope, and ship's rigging. Power transmission. Suspension bridge cables. Rope for all haulage purposes. Flattened strand rope. Non-spinning rope. Steel clade rope. Locked coil track cable for aerial tramways. Flat rope.

Special rope made to order to suit any purpose.

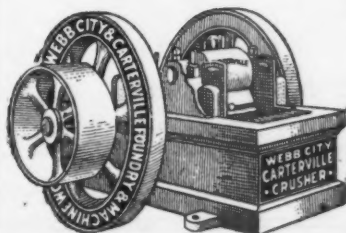
American Steel & Wire Company

Chicago, New York, Worcester, Cleveland, Pittsburgh, Denver. Export Representative: U. S. Steel Products Co., New York. Pacific Coast Representative: U. S. Steel Products Co., San Francisco, Los Angeles, Portland, Seattle.

The real value of a crusher lies in its durability.

We assert that our crushers surpass all others in their simplicity of construction, efficiency, and in the small cost of maintenance and repairs.

Webb City and
Carterville Fdy.
and Mache. Wks.
WEBB CITY, MO.



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TRAYLOR GYRATORY CRUSHERS

are equipped with up-to-the-minute improvements which proves that the economy in operation of our crushers produces more tonnage per horse power than any other machine on the market for similar conditions.

A Well-Proportioned Shaft suspended at the point of least motion.

A Spider set clear of the concaves allowing same to be removed and replaced without interfering with other parts of the machine.

A Positive Lubricating System which insures a continual and ample lubrication so essential to the efficiency and value of the machine. Above are a few of our superior features.

A DETAILED DESCRIPTION IN CATALOGUE G-2

Send for your copy to-day

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Increase Your **VOLUME** of Lime Business



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TIGER BRAND HYDRATED LIME

Everyone knows it—the architect who specifies it for plastering, the engineer who uses it for waterproofing concrete—down to the mason who insists on 10% of Tiger Brand in his mortar so that it will spread easier.

All these men are pulling for you—helping you to sell more when you handle Tiger Brand.

The Kelley Island Lime & Transport Co.
CLEVELAND, OHIO



This is what you want in Hydrated Lime, Mr. Dealer

Lime that is perfectly slaked, of extreme fineness, that is positively guaranteed not to "pop."

Monarch Hydrated Lime is of absolute uniformity, no underburned or overburned lime to be eliminated.

It's a pleasure to dealers to recommend this well known Brand. It means more business, more calls for Monarch Brand, More Profits for you.

Monarch publicity service is a new aid to you in selling and creating a call for Monarch Hydrated Lime. Be a Monarch Man. Write us today.

National Lime & Stone Co.
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BANNER HYDRATE LIME

is best for

MASON WORK and PLASTERING

Sold to **Dealers** only

FOR INFORMATION APPLY TO

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A. H. LAUMAN, President

PITTSBURGH, PA.



Clyde Hydrator with Hood
"The common sense way"

SIMPLICITY IS THE KEYNOTE OF SUCCESS

It does not take a "master mind" to install a CLYDE Hydrating plant, nor does it take a "high priced" engineer to run one. If YOU, Mr. Lime Manufacturer, realized how simple it is to obtain a PERFECT HYDRATE, with the CLYDE HYDRATOR you would place your order with us by FIRST MAIL. Write us today—NOW, and let us explain to you what CLYDE PROCESS hydrated lime is and how to obtain the best results, then

Use your own judgment—it's up to you

H. MISCAMPBELL, Duluth, Minn.

Patentee and Sole Manufacturer

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The sales and accounting departments of the Mitchell Lime Co. have been removed to Mitchell, Indiana. Closer touch with plant operations will enable us to materially improve our service to customers.

KINDLY ADDRESS ALL COMMUNICATIONS

MITCHELL LIME COMPANY

MITCHELL - - - INDIANA

The Ohio and Western Lime Company

WORKS AT
Huntington, Indiana
Marion, O.
Gibsonburg, Ohio
Festoria, Ohio
Sugar Ridge, Ohio
Tiffin, Ohio
Genoa, O.
Limestone, Ohio
Lime City, Ohio
Portage, Ohio
Lucky, Ohio
Bedford, Ind.

MANUFACTURERS OF AND WHOLESALE DEALERS IN

Ohio and Indiana White Finishing Lime, Ground
Lime, Lump Lime, Fertilizer Lime, Hydrate
Lime, Cement, Plaster, Hair, Etc., Etc.

Capacity
8000 Barrels
Per Day

MAIN OFFICE: Huntington, Ind. Branch Office: Marion, Ohio.

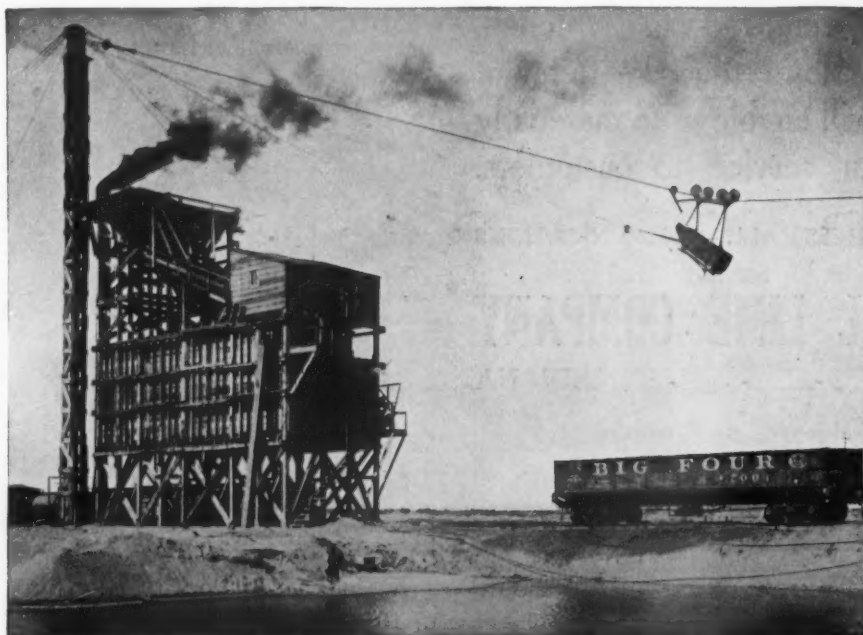
IF IT IS
LIME
WE MAKE IT
(STRONGEST IN OHIO)

BULK and Barreled -:- "MASON'S HYDRATE"—For Brick-work, plastering and masonry. -:- "LIME FLOUR"—Hydrated Finishing Lime—Best on the market. -:- "CLOVER GROWER"—Land restorer, for the farmer—none better. -:- "CARBO HYDRATE"—Soil sweetener—crop producer. -:- Prompt shipments. -:- A dealer wanted in every town. -:- WRITE OR PHONE FOR PRICES.

The Scioto Lime and Stone Co.
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This Successful Gravel Washing Plant Has Resulted in Several Similar Installations



Plant of The Kampeskra Materials Co., Watertown, S. D.

The low cost of operating, and the high grade of material produced by the Kampeskra Materials Co. with this plant has proven the worth of the Dull design and equipment.

Since this plant has been in operation, several similar Dull Plants have been installed with equal success. Why not let us furnish your equipment and satisfy you, too?

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CLINTON MORTAR COLORS

The Standard for More Than a Quarter of a Century.

They embody
QUALITY, STRENGTH and DURABILITY

Have stood the test of over

THIRTY YEARS

Metallic Paint, Mortar Colors, Roof Cement, Etc.
Prices and detailed information furnished on request.

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CLINTON, N. Y.

**YOUR PROFITS TELL THE STORY WITH
NEGLEY EXCAVATORS**

ALL SLACK CABLE-WAY OPERATIONS

WITH
EFFICIENCY AND ECONOMY

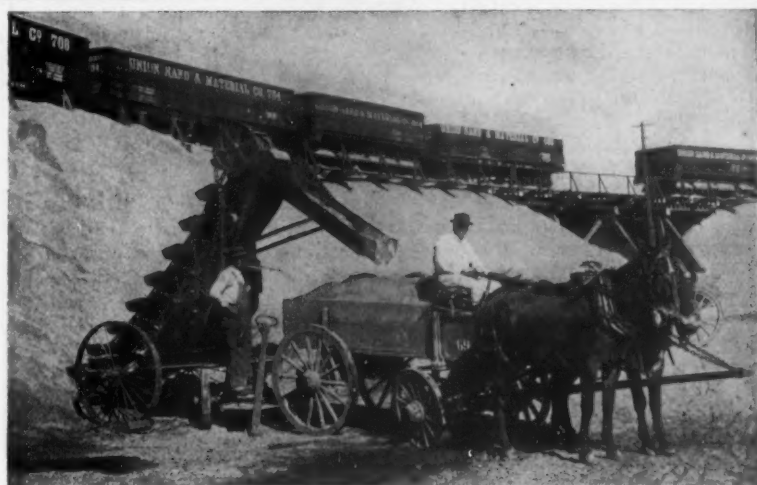
NOT HOW CHEAP

BUT HOW GOOD

LOOK WELL TO THE VIRTUES

INDIANAPOLIS CABLE EXCAVATOR CO.,

BEAUTY AVE. & NEW YORK ST., INDIANAPOLIS, INDIANA
LELAND EQUIPMENT CO., San Francisco, Cal.
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LECKY & COLLIS, Ltd., Montreal Toronto Napanee
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If you don't believe money is made loading trucks by
Haiss Wagon Loaders, just ask the man that has one.

Haiss Wagon Loaders

(Patented)

dig trap rock, sand, gravel, coal, coke, etc., from ground storage and load into trucks for less than 1 cent a cu. yd. for electric power, and at a speed of 1 cu. yd. per minute. This machine is different—it **digests**. Write for cost data and learn what contractors and material men have saved with a Haiss Wagon Loader.

The George Haiss Mfg. Co.

Incorporated

146th St. & Rider Ave., - NEW YORK CITY

Are You Getting Full Capacity From Your Plant?

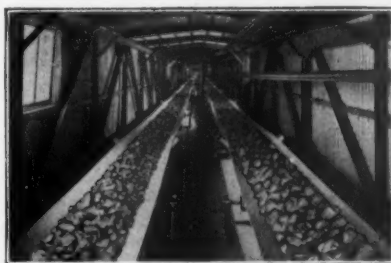
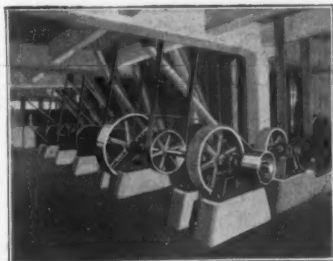
To get this, your elevating, conveying and screening system must be able to deliver the full capacity of your crushers every minute that you run.

If these parts of your equipment are continually falling down on the job or need a large amount of repairing to keep going, **you are losing money.**

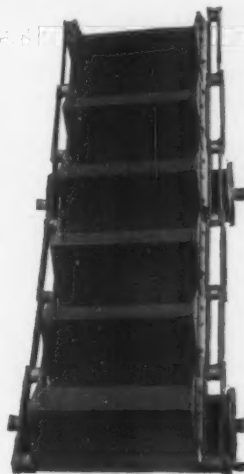
If you want equipment that you can depend on **twenty-four hours a day every day in the season, specify and insist on**

WELLER-MADE

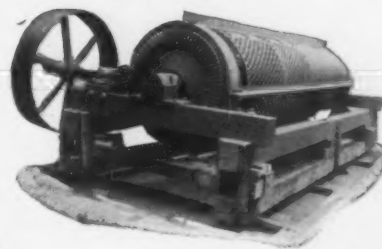
Complete
Power
Transmission
Equipments
of all kinds.



Belt
Conveyors
for any
material
10" to 60"
wide.

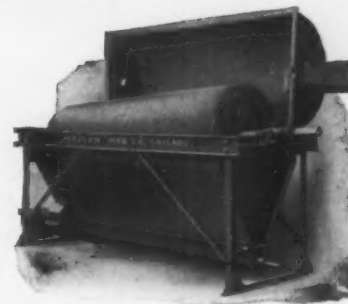


Heavy Bucket Elevators up to 84" wide and 36° pitch.



Revolving
Screens
of every
type for
every
purpose.

Special
enclosed
Screens for
dusty or fine
materials.



WELLER MFG. CO.

Send for General Catalog P.20

CHICAGO

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HYDRATED LIME

Its Marvelous Increase In Consumption

The Kritzer Service

Any lime can be successfully hydrated by our process; but whether your lime can be hydrated and successfully marketed is another question. We study your proposition and the possibilities of its commercial success, and advise you accordingly. Our ten years' experience in the business is a valuable assistance in this. Ours is not a mail order proposition. We investigate our customers' proposed plant thoroughly before we will enter into a contract with them. We turn down more prospects than we advise to go into the business. We can't afford to have any failures. Our customers' success is our success.

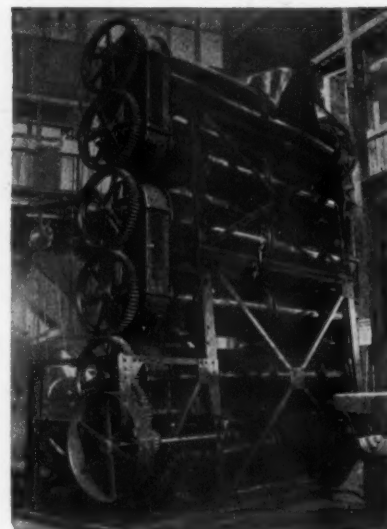
WRITE TO US

Are You Meeting the Increasing Demand for Hydrated Lime?

There is nothing forced or unnatural about the growing popularity of this product. It is a natural growth resulting from a widespread awakening to the advantages of Hydrated Lime for a variety of uses—as waterproofing for Concrete, in wall plaster, and in almost every case where lime is called for. In hydrated form it is weatherproof, more easily handled, and better adapted to modern methods, both of commerce and construction. A continued growth of the demand may therefore be expected.

The Kritzer Way

insures a product which will hold a continued place for itself on the market. We install plants complete, designed by our own expert engineers to meet your local conditions and turn out a uniform grade of Hydrated Lime of the highest standard, and with the greatest economy in cost of production. The Kritzer Continuous Hydrator, and the accessories installed with it, are the recognized standards in this line.



KRITZER CONTINUOUS PROCESS

THE KRITZER COMPANY Chicago, Ill.

Perfect Lime Burning Economy

has resulted from the use of the

DUFF PATENT

GAS PRODUCER INSTALLATION

This device is in successful and satisfactory operation in the following representative plants:

La Garde Lime & Stone Co., La Garde, Ala.
Ohio & Western Lime Co., Gibsonburg, O.
National Mortar & Supply Co., Gibsonburg, O.
Knickerbocker Lime Co., Philadelphia, Pa.
Dominion Lime Co., Lime Ridge, Quebec.

Installations now being made in other plants.

DUFF PATENTS CO., Inc.
PITTSBURGH - - - PENNSYLVANIA

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS



Seven Pierce-Arrow Motor Trucks Haul Iron Ore Through the Adirondack Wilds

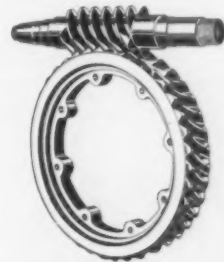
Anyone who is up against the proposition of hauling heavy materials over rough country should read the story of what the George H. Pride Company's Pierce-Arrow fleet has been doing in the Adirondacks.

After horses and traction engines had proved utter failures on the job, these Pierce-Arrow trucks, loaded with iron ore, tackled the round trip haul of 45 miles over the roughest, hilliest kind of country and made it, as regularly as express trains, in 5¼ hours.

Running day and night, with double shift of drivers, each truck averaged 180 miles a day. At night the searchlights of the trucks would often flash on fleeing deer and even bears were occasionally encountered along the route. Anyone who thinks there is nothing picturesque in the contracting business should read this story, which also gives interesting details of loading, gradients, routing, etc.

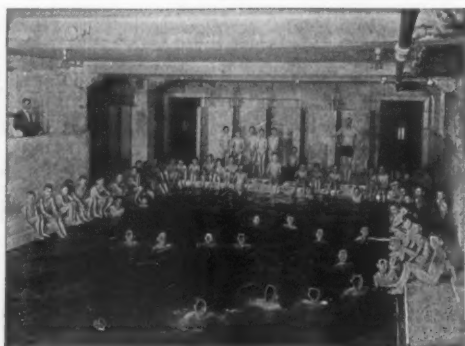
We shall be glad to send the full account, as recently published, to any contractor interested.

THE PIERCE-ARROW MOTOR CAR COMPANY
BUFFALO, NEW YORK



The Worm-Gear

All Pierce-Arrow Trucks are equipped with the worm-gear drive, which is a positive guarantee of effective service under the most difficult conditions.



Y. M. C. A. SWIMMING POOL, WHEELING, W. VA.

MEDUSA WATERPROOFING

USED TO MAKE IT WATERPROOF

MEDUSA Waterproofing is a dry powder to be mixed with dry cement, and a trial will convince cement users that it is the only true preventive of dampness in concrete. Used extensively by U. S. Government in coast defence work, and is being shipped to all parts of the world. Absolutely insoluble and unaffected by water even after years of contact.

Write for free illustrated booklets and samples of

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MEDUSA WHITE PORTLAND CEMENT
MEDUSA WATERPROOFING
(POWDER OR PASTE)
MEDUSA WATERPROOFED CEMENT
(GRAY AND WHITE)

Sandusky Portland Cement Co.
SANDUSKY, OHIO



THE IMPROVED EQUIPMENT CO.

80 Wall Street, New York City

COMBUSTION ENGINEERS

DESIGNERS AND BUILDERS OF

COMPLETE GAS PLANTS GAS BENCHES
LIME BURNING PLANTS GAS PRODUCERS
SPECIAL INDUSTRIAL FURNACES



ESTABLISHED 1866.

Saylor's Portland Cement

First Portland Cement made in America
Used by the United States Government since 1876

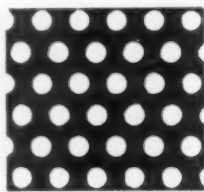
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PERFORATED STEEL SCREENS AND
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DRYERS

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Rock, Clay, Coal, Etc.**

All Mineral, Animal and Vegetable Matter

We have equipped the largest plants
in existence and our dryers are oper-
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—S. C.—

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ROBERT W. HUNT & CO., ENGINEERS
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CHEMICAL AND PHYSICAL TESTING

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Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS

Rock Products and BUILDING MATERIALS

INCORPORATING DEALERS BUILDING MATERIAL RECORD

Volume XIV.

CHICAGO, MARCH 22, 1915.

Number 10

PUBLISHED SEMI-MONTHLY.

DEVOTED TO

Quarry Products, Cement, Lime, Plaster, Sand and Gravel, Clay Products and Building Specialties—Fireproof Building and Road Construction.

THE FRANCIS PUBLISHING COMPANY.

EDGAR H. DEFEBAGH, Pres.

Seventh Floor, Ellsworth Bldg., 537 So. Dearborn St., Chicago, Ill., U. S. A.
Telephone: Harrison 8086, 8087 and 8088.

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GEORGE A. OLSEN, Editor Retailers' Section. F. G. PULLEY, Associate Editor.
H. F. AKE, Secretary.

DRUSUS H. NICHOLS, Advertising Manager.

Communications on subjects of interest to any branch of the industry are solicited and will be paid for if available.

Every reader is invited to make the office of Rock Products and Building Materials his headquarters while in Chicago.

Editorial and advertising copy should reach this office at least five days preceding publication date.

TERMS OF ANNUAL SUBSCRIPTION.

In the United States and Possessions.....\$1.00

In all other Countries in the Postal Union.....\$1.50

Subscriptions are payable in advance, and in default of written orders to the contrary, are continued at our option.

Advertising rates furnished on application.

Published on the 7th and 22nd of each month.

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Retailers' Season of Learning.

In accordance with the laws of nature and the customs of mankind, retailers of builders' supplies and specialties often find it necessary to study the different phases of salesmanship and improved methods of conducting a retail business.

In practically every other business the summer season provides ample time for posting oneself on intricate questions of scientific salesmanship and means of increasing profits. But, unlike these industries, the building material man can spare but little of the summer season for any purpose other than promulgating the particular business in whose success he is vitally interested. Such moments as he is able to take his mind off the routine of business he may be found scrutinizing the pages of his trade journal for the experiences of some of his fellow retailers with the hope of bettering his own business conditions in order that a greater margin of profit will be received for the efforts expended.

It is during the winter and early spring months after the building season has drawn to an end, and the conditions of the weather prevent concrete workers, masons and others from plying their trade, that the retailer gets an opportunity for thoroughly reviewing his business of the past season and searching for greater light with which to take advantage of his possibilities during the coming building period. It is because of the weather conditions that the dealer is thus forced to keep his nose close to the grindstone during the summer months and seek information during such times as the thermometer hovers around the zero mark.

This condition of the retailer accounts for the fact that his conventions are held in the winter time. From New England to California and in practically every state in between where associations exist, the principal or annual meeting is held during this season of the year.

It is at the present time that building material dealers may be found assembled in various parts of the country collectively studying questions of credit, lien laws, manufacturers' relationships and such other propositions as enter into the business of retailing building supplies. It is also at this season of the year that retailers carefully read the pages of their trade journals, not only for the valuable information they contain relative to the uplifting of the building material industry, but it is a known fact that no one, in a greater measure, more carefully reads the announcements of manufacturers as published in the trade journals. The retailer recalls the experience he has had with his particular lines and the various materials which he has specialized in during the past 12 months and sets about to make arrangements with manufacturers of supplies who have materials and specialties which could be advantageously added to those now carried in stock.

The building materials dealer has his season of learning; that season commences immediately after the close of the old year and continues until the activities of the spring building season demand his entire time and attention. Consequently, it is at this season of the year that we find the retail dealers in convention. As demonstrative of this fact, a number of annual meetings have recently been held, all of which were favored with the attendance of the most progressive retailers eligible for membership. Among the bodies recently in convention were the National Builders' Supply Association at Chicago; Indiana Building Material Dealers' Association at Indianapolis; Illinois Lumber & Building Material Dealers' Association at Chicago; Building Material Dealers' Association of Eastern Pennsylvania at Allentown; Building Material Dealers' Association of the Del-Mar-Col district at Washington; the New England Builders' Supply Association at Boston; New Jersey Mason Material Dealers' Association at New York City, and the West Virginia Association at Parkersburg, not to speak of the many retail lumber associations, all of which have many builders' supply members, and the local credit associations to be found in every large city and many smaller centers throughout the entire country.

In addition to the many meetings that have been held there will be a gathering of the retailers of the New York state retailers at Utica on March 24 and 25.

These meetings are held for the sole purpose of exchanging experiences and for the mutual benefit of every member and the moral uplift of the building material industry. It is true that none of these associations will guarantee that as a visit to the convention cities the retailers' profits will be increased; but they do not hesitate in assuring their members that ample opportunity will be given every attendant to study conditions and experiences which if properly taken advantage of will surely result in better profits more easily made.

The good roads movement increases in interest for the reason that the more we give it attention the more we realize that it is the biggest civilizing problem with which men now living will ever have an opportunity to take any practical part. The worst feature, without a question, revolves around the fact that road expansion inevitably is involved in politics. There is no way to get together such vast sums of money except by taxation. Taxation is a function of government; and government, as we see it, is controlled by politics, by parties, and these by party demagogues.

WITH YOU and ME



CHARLES S. FLETCHER,
MANAGER SACK DEPARTMENT, UNIVERSAL
PORTLAND CEMENT CO.

The Ohio & Western Lime Co. is letting contracts for a new lime plant at Gibsonburg, Ohio, and it is expected that this will be ready for use by June 1.

S. B. Newbury, president of the Sandusky Portland Cement Co., has been spending the past few weeks at Bermuda. His colleagues at the Cleveland office expect him to return home at any moment.

A. B. Becker, who was formerly with the engineering department of the Universal Portland Cement Co., has been placed on the staff of the Lehigh Portland Cement Co., and since March 15 has been engaged as its engineer.

R. H. Adams, who for years has been manager of the building material department of the Consumers' Co., Chicago, has severed his connections with that firm. Since his resignation, C. R. Campbell, general sales manager, has added the management of the building department to his many duties.

The Union Lime Co., of Fond du Lac, Wis., has installed a \$2,500 steam hoist at its plant at Hamilton for the purpose of elevating stone to the kilns.

Henry Albinger has severed his connection with the Acme Brick & Sand Co., of Milwaukee, whose plant is located near West Bend, Wis. Mr. Albinger has purchased a farm near West Bend.

Stockholders of the Barron Red Pressed Brick Co., of Barron, Wis., recently elected the following officers and directors: President, J. P. Kohl; vice-president, Otto Berg; secretary and treasurer, M. I. Berg; sales manager, G. A. Koerner; directors, J. P. Kohl, Otto Berg, J. R. Ferris, N. O. Strand and L. K. Sather.

A. H. Lauman, president of the National Mortar & Supply Co., Pittsburgh, has been quoted as saying that he would never purchase an automobile as the street cars were good enough for him. A few days ago, however, he was induced to buy an eight-cylinder Cadillac and hereafter when our representatives are in Pittsburgh, they will expect to make their calls in "Pop" Lauman's car.

The United States Gypsum Co. has completed arrangements with Franklin E. Martin, president of Hurd-Martin Co., Detroit, for four water-color productions of a bird's-eye view of the plaster mill at Oakfield, N. Y., said to be the largest in the world. One of these views will be sent to the Panama-



CHARLIE SCHAEFFER'S LAUNCH IN FLORIDA WATERS.

Pacific Exposition at San Francisco, one will be on display at the home office at Chicago and the others will be sent to New York and Cleveland offices.



OSCAR N. LINDAHL,
CHIEF ACCOUNTANT, UNIVERSAL PORTLAND
CEMENT CO.

C. B. Fry, of the Keystone Plaster Co., Philadelphia, who was reported some time ago as being on the sick list, is again in good health. School houses, public buildings and other structures are now receiving the attentions of the "Keystone" plaster man.

Warren E. Emley, of the United States Bureau of standards, stopped off at Chicago for a visit at the office of Rock Products and Building Materials on his way to Washington and Oregon, where he has gone to perform some special work for the government bureau.

E. R. Cross recently resigned his position as president of the Kaw River Sand and Material Co., Kansas City, Mo., and the directors named Charles W. Bartlett as his successor. Mr. Bartlett served several years as a deputy under the Missouri state bank inspector and more recently was secretary-treasurer of the Citizens' Savings Trust Co.

After the Convention.



Universal Appointments.

A circular emanating from Secretary T. J. Hyman's office, of the Universal Portland Cement Co., 208 South LaSalle street, Chicago, advises that Charles S. Fletcher has been appointed manager of the sack bureau, and Oscar N. Lindahl has assumed the duties of chief accountant, the effective date being March 1.

Mr. Fletcher hails from Canada, having first seen the light in that great country Nov. 1, 1885. He came to Chicago in 1906 and after holding various lucrative positions in the Windy City became associated with the Illinois Steel Co. as record clerk in July, 1907. On April 1, 1908, he secured a position with the Universal Portland Cement Co. as clerk in the sack department, and performed his duties so ably that he was promoted to chief clerk of the accounting department Dec. 1, 1910, which position he held until March 1, when he was appointed manager of the sack department. Mr. Fletcher has complete charge of the sack and order departments.

Oscar N. Lindahl, who has just taken up the duties of chief accountant, has been connected with the Universal Portland Cement Co. for the past four years. He accumulated the salient features of the accounting end of the business in the cost department of the Illinois Steel Co., where he was employed for three years prior to coming with the Universal company.

The initiative and ability displayed by both Mr. Fletcher and Mr. Lindahl in the past promise well for their success in the new duties which they have just entered upon.

The Lost Has Been Found.

During the recent Cement Show at Chicago, numerous inquiries were made relative to the whereabouts of Harold M. Scott, Western sales manager of the Lehigh Portland Cement Co. It was noticed during the entire show that Mr. Scott was not to be found. The mystery which surrounded his whereabouts was cleared last week when a picture reached Chicago from St. Lucie Inlet, near Palm Beach, Fla. The picture shows Mr. Scott thoroughly enjoying himself on the Anna May, the 43-foot launch of Charles Schaeffer, of the firm of Schaeffer & Gengnagle, Dayton, Ohio. An illustration of the boat, which has a nine-foot beam and is fully equipped for fishing-and-pleasure parties, is shown herewith. Mr. and Mrs. Scott and Mrs. Schaeffer are on the hurricane deck and Mr. Schaeffer is posing in the rear of the boat close to the National emblem. In the company of Mrs. Scott, Mrs. and Miss Schaeffer, the two men spent a delightful period of two weeks' fishing. It is said that Mr. Schaeffer caught the fish, some averaging from 28 to 50 pounds, while Harold spent a good deal of his time hobnobbing with Dick Croaker and other celebrities who were "wintering" in the South.

Upon inquiry at Dayton it was learned that George Gengnagle is a little envious of his partner's ability. George states that he can fish as good as Charlie, but that he never gets an opportunity to be away, explaining that someone must stay at home to take care of the business.

In the New Year for Business.

We feel it in our bones—1915 is going to stand up—brace up—look up—push up!

We can see it in the crop money—ten billions from 1914's harvests, with an upward boost from 1913 of 83 millions.

We can see it in the now smooth financial machinery, oiled by the new reserve system.

We can see it in the collapse of the old spirit of snarling at success in business, by the common people and by the halls of Congress.

We can see it in the effects on business, of the

The BUILDERS' POET

Selling En Masse.

(Suggested by Mr. Bryan's temperance lecture in Billy Sunday's tabernacle in Philadelphia, where 10,000 signed the pledge.)

I.

Down in deal old, drear old Phily,
'Neath the tabernacle roof,
Where the sturdy, wordy Billy
Rounds up sinners on the hoof;
Sat ten thousand worthy quakers
With expectant, hopeful looks,
Merchants, grocers, butchers, bakers
And a sprinkling of crooks.

II.

Bill Sunday strode majestic
To the center of the stage,
"Dear friends," he said, "I'll
Introduce the wizard of the age,
Another Billy, whom I think
Will put the Devil on the blink."
Thus recommended, William J.
(Whose name you've heard before)
Arose in his enchanting way
And occupied the floor.

III.

I'll not attempt to weary you
With what he handed out,
And so I'll briefly summarize
Just what it was about.
He said intoxication is the
Menace of the nation,
With metaphors and epigrams

He put dread Rum to rout.
The logic of his arguments was
Patent at the close
For eagerly and greedily ten
Thousand men arose;
They signed for prohibition, every
Single, blessed man,
And swore, "No more our heads will roar,
From rushing of the can."

IV.

Now ridiculing isn't right,
That isn't my intention,
I have another purpose quite
Than backing booze to mention.
If Bryan sold ten thousand men
The prohibition label,
Think what it means a moment, then
Just figure, if you're able
How cheap his services would be
If he sold goods for you or me.

V.

Let's form a club of building firms,
(Enough to meet Chautauqua terms)
Invite ten thousand prospects there
In some big hall, most anywhere,
Dispense some smokers and vinal juice
And then let William J. cut loose.
—Frank Adams Mitchell.

The Editor.

The editor, who wields his pen, up in his sanctum or his den, is working hard, and hoping much that with you he'll keep in touch. A sort of clearing house he keeps; all sorts of facts he has, in heaps collected over all the earth, and used according to their worth.

It is his job to take his spade and dig up facts to help your trade, much special knowledge to collect and make his columns all reflect the best in every modern plan to keep your business in the van.

So read the things he has to say, and jog with him along the way. He has no halo on his head, but oft a moistened towel, instead. He does not bask in silk attire, or fiddle on a costly lyre; his shirtsleeves rolled up to his ears, he toils away with pen and shears, collecting thoughts he hopes will aid to make a winner of your trade.

And better service he can do, if he walks hand in hand with you. Oh, service is his end and aim, to help his readers play the game!

So read his preachments, and you'll find the reason for his ceaseless grind. And if you'd fill his soul with joy—pure happiness, without alloy—you'll write to him when you have found a lot of puzzles floating round. No doubt you often have on hand a problem you don't understand, some question or some ugly twist your own experience has missed. Then write the editor and tell the inside facts—'twill please him well, and it will make him blithe and gay to shoo your worriments away.

That journal feels itself a goose, which isn't of true worth and use, to every reader on its list; its true vocation it has missed.

So, cement man, be not afraid to ask the journal of your trade for any help you're sighing for, 'twill please the cheerful editor.

—Walt Mason.

surgery of hard times—the cutting away of inflation, sores, tumors and wild flesh. Panic is a master antiseptic to business, as starvation is to the poisons of the body.

And in the European war we see the grim hand of fateful progress, shifting to America the world's centers of many more peaceful activities than ever before, and almost guaranteeing that America for fifty years shall be trade's great field and factory.

As John Hay said prophetically at the McKinley monument unveiling: "That world leadership which has during all history resided always somewhere between the banks of the Euphrates on the east and the banks of the Thames on the west, has silently moved to the banks of the Hudson, almost between daylight and dusk!"

Yes, it's to be a great New Year!

—J. G. F., in Advertising & Selling.

The RETAILER

Team Work in Selling

By Wm. H. Price, Advertising Manager, United States Gypsum Co., Chicago, Ill.

At the recent conventions of the National Builders' Supply Association at Chicago and the West Virginia Lumber and Builders' Supply Dealers' Association at Parkersburg, William H. Price, advertising manager of the United States Gypsum Co., delivered his address on "Team Work in Selling."

Mr. Price, who has been with the United States Gypsum Co., for the past eight years, was born at Dubuque, Ia., and raised in the south, making his home at Gainesville and Atlanta, Ga. His father was, for many years, an officer of the Southern Railway and his uncle, Col. W. P. Price, during his life took an active part in the political life of Georgia, being a prominent attorney of that state. His interest in the uplift of humanity through the working of the soil led him into the study of agriculture with the result that he founded the North Georgia Agricultural College at Dahlonega. As a token of respect and appreciation for the valuable work performed, his neighbors repeatedly for eight times sent him to the United States Congress.

Mr. Price, or "Billy," as his friends know him, spent his early youth in the newspaper business, serving several years in journalistic work for the Associated Press and for independent newspapers. About eight years ago, for the purpose of perfecting himself on the knowledge of gypsum products and how to sell them Mr. Price entered the sales department of the United States Gypsum Company and for three years worked in some of the southern states, where by coöperative methods he practically eliminated competition, in all cases making the dealers his friends and staunch supporters of the company he represented.

Because of the ability to instruct retailers in the art of selling gypsum products, he was made advertising manager of the company five years ago, in which position he has grasped the opportunity of producing high class advertising matter. The manner in which his department has developed its coöperative work and enabled materially in the sale of the U. S. G. output places him in a peculiar position to speak on the above topic.—Editor.

In all lines of business—in all the activities surrounding the production of raw materials, their conversion into manufactured articles, their transportation, their distribution to the consumer—the fundamental problem is selling. It is a vital question with the manufacturer as it is with the distributor—the Dealer—for the production of an article, however excellent, that cannot be sold or is not sold or is not properly sold, is labor totally or partly lost.

For this reason the question of salesmanship is of inexhaustible interest to live business men, and it has seemed to me that I can make best use of the privilege of addressing you in trying to concentrate your attention for a few minutes on an aspect of salesmanship which has in recent years aroused a great deal of thought and discussion and which must surely be of interest to you, a representative assembly of American salesmen, and employers of salesmen.

The aspect of salesmanship I wish to discuss is "Team-work in Selling." A term which covers the combined efforts of producers, distributors and salesmen, whether employed by the manufacturer or distributor. I shall incidentally have to refer to the salesman-link in this chain of co-operative effort but what I am particularly concerned with is to show how the manufacturer and the distributor by uniting their selling activities can both achieve far better results in the sale of builders' supplies.

That is what we are all after—better results—better business. But we are not going to get better business merely by wishing that business were better. And of all idle occupations the most foolish is to spend time thinking and talking of what might be done if this and that condition were improved. For instance, if the European war were only over! Smile, cheer up, don't worry! The "detonations" of the big guns across the creek are not going to blow good business out of the United States. America is commercially bomb-proof. Business is good only as it is made good by the application of human brains and energy. Fundamentally this is a mighty good country to do business in because there are so many people in all parts of it who have the means to buy the things which you and other dealers have for sale. So forget about the pos-

sibility of bad conditions. "Hard times" is largely an imaginary cyclone that spends most of its fury around the inefficiently organized and poorly managed business.

Business success in the builders supply line is predicated upon delivering the goods—getting the business. To get the most out of any market or territory in the easiest, best, most satisfactory way calls for "team work" on the part of the manufacturers and supply dealers.

Just what is "team work"? The phrase itself needs no explanation but its application to salesmanship I think can be made clear by citing what seems to me to be a typical case of successful "team work" in the exploitation and sale of a manufactured article. It



WILLIAM H. PRICE, ADVERTISING MANAGER,
UNITED STATES GYPSUM CO.

would be invidious to refer to any case in the building supply business as typically successful, so I prefer to illustrate from a line in which you are not directly interested.

I refer to the phenomenal success of the Hot Point Electric Heating Co. of Ontario, Cal. Situated way out on the coast, clear across the continent from both raw material supply and consumer markets, it has in a few years, with more or less inferior goods, reached twice the output of its numerous competitors, many of whom were in the field years ahead.

What is the explanation? Simply this, the Dealers linked up local sales work and advertising with the concentrated sales work and advertising of the manufacturers, which developed a local merchandising movement with force in it. The result of this "team work," this concentrated, earnest co-operation on the part of the Dealer, Hot Point goods were sold ahead of any of the older, better established electric utensils. Now a nation-wide consumer demand for Hot Point has been developed which makes the line very attractive to the dealer. The dealer has secured an establishment that means more business and more profits to him by reason of this intelligent, timely co-operative work in selling goods. In linking up with the manufacturer's sales work hundreds of thousands of lines of newspaper advertising was done by the Dealer at his own expense to promote Hot Point sales and it was this local advertising that did most to get the business. The advertising and sales efforts of the manufacturers themselves were simply the self-starter. The local advertising done by the dealer cashed in on the work of the manufacturer—it continued the interest—told the prospects where they could see and get the goods. It concentrated the nation-wide campaign in the dealer's own community and carried the momentum right to the consumer's pocketbook. Now to deal specifically with the builders' supply business, let us briefly consider the proper relations that should exist between the manufacturer and the dealer.

Recognizing that business is no longer done in a whisper and that we must talk right up in the meeting if we expect to get anywhere, I desire to discuss this question of "team work" quite frankly. Some men are like the little boy who "disliked his teacher because she didn't teach him nothin' that he knew." In this case I make a bid for the teacher's job.

In the builders supply business if the manufacturer is indifferent to the dealer's interest or the dealer is

indifferent to the manufacturer's interest the result is lost motion. There is not only sand in the gear box but some of the spark plugs are missing. There are, of course, peculiarities in every line requiring different treatment. There can be no hard and fast rules for all conditions of trade, character of goods, etc., but there are two factors absolutely essential to the greatest success: First, the production of an article of a quality that will repeat, with a real service behind the goods; secondly, a dealer who will properly support the manufacturer's trade policy by properly presenting the merchandise to the Dealer's trade.

Let me explain more fully what I mean by the first of these essentials—the production of an article of a quality that will repeat with a real service behind the goods.

You may say: "Why, of course, if the article isn't right—if it isn't good enough to bring a customer back in case he needs more of its kind, the dealer doesn't win out and—what is more—the concern who makes it, won't stay in business." Well, that's true, but that's only part of the modern conception of a manufactured article which "makes good." Modern methods demand an article that will repeat with a real service behind the goods. I repeat; A real service behind the goods. Without that service, all the efforts of the manufacturer and the dealer may be wasted wholly or in part.

It is not enough to make a good article, it must be a salable article—one capable of giving the consumer full value received for his investment—a provision must be made for selling it—that is, for making its merits known to the consumer. True merit may slumber peacefully beneath the buyer's nose. Intensified selling methods now prevail; to be noticed one must be aggressive and impressive.

This is the modern conception of business, a conception brought about by the multiplication, expansion and diversification of modern American industry.

A great philosopher once said that "if a man makes a better rat trap than his neighbor the world will beat a path way to his door in order to buy it." Nothing of the kind—not in these days, at least. The rat trap that is going to be sold must not only be excellent of its kind but must be brought to the attention of the public. Otherwise, it is going to be a "rot trap" and stay on the shelf with its merits unknown, or naturally be classified as hard stock by the dealer.

You see what I am driving at. The manufacturer must keep in mind the necessity of selling what he makes—not simply making it as good as he knows how. It is comparatively easy to manufacture a good article; to keep it moving against competition requires skill.

In the manufacturer's calculation of the cost of any article to him there ought to be included that part of his expense of distribution and selling which falls naturally to him, just as in the dealer's calculation of what an article costs him there ought to be included the figure which represents his expense in selling it properly.

The manufacturer who makes a good product and who is alive to the interest of the dealer as well as to his own, realizes that his task does not end with the production of an article and placing it somehow in the dealer's warehouse. He must assist the dealer to make that article move. He must do his part in acquainting the public with his product, in advertising it and educating the particular class of the public who are possible users as to its uses and its advantages, and it is in this educational effort that there is scope for "team work" by manufacturer and dealer if maximum results for both are to be enjoyed.

The old notion of a manufacturer and "not yet altogether obsolete" was of a man absorbed wholly in materials, processes and machinery—whose whole interest was centered on turning out the very best thing of its kind, from the best available materials and in the most economical way. Well, the progressive manufacturer of today is concerned not less, but rather more in all this, but in addition he is no less directly interested in the problem of distribution and selling. And no manufacturer is living up to modern standards of business who does not give sufficient thought to the question of how he is going to help the dealer sell his goods. And no manufactured article has its cost properly estimated unless there is included in the price to the dealer an amount which represents the manufacturer's expense in exploiting it to the available public.

No one has placed a limit on your possibilities as a dealer except yourself. There is no limit on the possibilities in retailing. The liveliest and most successful merchants in the United States are retailers—and invariably they have developed from small beginnings—but you cannot succeed as a retailer if you travel in a rut—or in circles.

There is a way for you to break into new territory. There is a way to get the right sort of co-operation from manufacturers.

There is a way to attract new customers.

There is a way to hold old customers.

There is a way to combat the "just as good competition."

There is a way to strengthen preference for your materials.

There is a way to differentiate your line from similar goods.

There is a way to extend your market to more securely establish it for yourself, and make more money as a supply merchant.

It's simply a matter of handling the right goods and doing business on the right basis. Efficiency plays a big part in modern business.

Every new customer you secure for material you handle comes from one of two sources—either they are new users whom you or your manufacturer have educated, or they are your competitor's customers whom you have educated. The loss of a customer may not only mean the total loss of your investment in your customer and the loss of future profits, but it also

means, in a degree, that your investment in that customer has even been transferred to your competitor and that he will reap the profit from a demand that you expended your money and effort to create.

To get and hold customers you must show them an advantage and make them prefer to do business with you.

In contradistinction to the dealer in food stuffs, clothing, etc., where constant demand is possible, the builders' supply merchant, with some exceptions, is or should be continually looking for new customers. A single customer may not have occasion again to purchase building material in a life time. Well-built houses outlast a generation.

Because of this condition if maximum results are secured in carrying on a builders' supply business it is certainly necessary to pay special attention to following up these prospective new customers. If a campaign of education is essential to any business, it certainly is to the dealer in builders' supplies.

It should be remembered that the best crop comes from the most fertile soil. Fertility comes from cultivation. The intensity of cultivation determines the value of the crop. Therefore, if you are not equipped with a system of sales machinery whereby this may be effectively and economically done then you are not properly cultivating your market or getting the most out of it in prestige and profits. This calls for "team work" on the part of the manufacturer and dealer. Enlist the services of the manufacturer—let him help you do this missionary work.

When you have merchandise of merit push it. Tell your story in a manner which will bring out the points of superiority lucidly and convincingly. If you are unable to devote the necessary time to do this, use the sales and advertising departments of the houses you buy your goods from. Make them give you the sales support that you as a distributor of their products are entitled to. Then link up your own forces properly with the manufacturer and go to it and stick at it. You will find that some of the manufacturers are well equipped to give you this support. You will find that they can be of material help to you and that they will really make your interest their interest. If you can't get this help in promoting the sale of the goods, my suggestion to you is that you get another line that will give it to you. Find a responsive interest and then use it and use it fully.

Do you employ salesmen? If you do, I assume that they are good salesmen. You cannot afford to use good salesmen to hunt up prospects. You cannot even afford to have them perform the elementary, or missionary and educational work that must precede every sale. Your salesmen should be "order closers" not missionaries. You can make them "order closers" by paying the way for them with direct forms of advertising. A series of letters, folders, or booklets worked out in some definite campaign style should be used to interest the prospect before the "order closer" gets on the job. In these letters or pieces of literature there should be a punch or a kick—real interest creators. The "order closer" starts in where the advertising-sales literature leaves off. Such treatment or preparation saves the salesman's time because in many cases he finds a receptive prospect—the advertising-sales literature has done its work—helped the salesman to bring home the bacon. He does not have to spend 9/10 of his time telling whom he represents and what they handle, leaving only 1/10 of his visit for selling effort. The absence of this kind of work is what often makes the salesman's road rocky, discouraging and expensive. That missionary or preliminary effort by the use of advertising-sales literature, concentrated on prospects is a mighty good way to put "pep" into your salesmen and keep it there.

Many of the progressive manufacturers of the country have dealers' service bureaus, equipped to furnish attractive booklets, folders, etc., advertising the dealer's name and business which are furnished gratis to the dealer. Some of them recognizing the need of close "team work" in promoting sales have gone a big step further and are furnishing an actual advertising service to the dealer. This includes not only localized conv but expensive engravings or electro-

types for the dealer's local newspaper or other advertising purposes.

The dealer who does not take advantage of the proffered help by the producer to win sales and to aid the dealer in establishing his market is preventing the flow of profits to his cash drawer. He is overlooking a good bet and his oversight hits him in a vital spot.

The dealer, it is fair to assume, is convinced of the merits of the article of which he buys a supply. If not convinced, why buy it? And if convinced, why not transfer his conviction to others—to actual or potential customers; in your case to your architects, to your contractors, to your plasterers, builders and such other specific classes within your field of operation. If you believe in your lines you should "talk them up"; if you don't believe in them you should discontinue them.

The manufacturer who has supplied or is ready to supply on request a whole arsenal of advertising ammunition in the shape of folders, circulars, booklets, letters, mailing cards, signs, newspaper ads, electrotypes, etc., etc., has done considerable of his part in "team work." If the dealer fails to do his part in the proper application of this and other available sales helps the manufacturer suffers, but the dealer suffers equally as much. Both lose. Cooperation is a matter of 50:50 in gain; each of it means loss in the same ratio.

A dealer with the right merchandising instinct is not going to under-estimate the value of this trade help. He is going to realize that when he uses advertising of this character bearing his imprint he is advertising himself and his business at the manufacturer's expense. Also, he is not overlooking the fact that this advertising is not only putting him in direct touch with live prospects for the particular product advertised, but these prospects also are in many cases prospects for other lines the dealer carries. He realizes the value of using newspaper space. He knows what it is daily accomplishing for the great department stores. He knows that a live paper makes a live town.

The dealer who sits inactive and fails to utilize all this advertising-sales power, who fails to connect up with the efforts of the manufacturer in the ridiculous position of one who should build a mill close by a river—a mill meant to run by water power, and who, instead of making the preparations necessary to divert the water to his mill, simply folds his arms expecting that the water will somehow rise to the level of his water wheel.

I repeat that the dealer who fails to use the advertising-sales power offered him by the manufacturer of a legitimate product must be unaware of the profits that lie in intelligent publicity, or is criminally negligent of his own best interests.

But that is not all. Most dealers are wise enough to make some use of the advertising matter which is put in their hands by the manufacturer, but many of them have no clear idea of all that is implied in the right kind of "team work" by manufacturer and dealer.

The dealer must not be a mere passive channel of distribution for the selling help supplied by the manufacturer. His interest must be active and intelligent if good results are to be won. It may be taken for granted that his heart is in his business, but his heart must be kept pumping good red blood—business push and enthusiasm—with a purpose back of it.

The best kind of advertising follow-up—better than any series of follow-up letters or circulars that could be devised, is the dealer's own heart-to-heart talks with possible customers, his own unremitting effort to "push a good thing along," once he is convinced that it is a good thing.

In every case and in all cases he must bring to bear the knowledge and enthusiasm he possesses. Common sense and vigor must pervade all his business relations. He will neglect no opportunity to cultivate the good will of his community through the best kind of service, for good will is directly related to good business, to profits. And having made up his mind to employ modern methods for all they are worth right through his business, he will not be found employing

old, disused and discredited methods, such as for instance, buying goods that he knows to be inferior from Bill Smith simply because Bill Smith is an old really new "good one" to tell him.

In a word "team work" from the dealer's standpoint is head work and heart work, and no dealer who gives it that kind of interpretation and lives up to it, friend or a good sort of fellow, or has always some is likely to regret it when he figures up his profits. Let it sink deep that in the tale that dollars tell there's always a chapter in every live dealer's experience that speaks eloquently of "team work."

Manhattan Dealers in Annual Meeting.

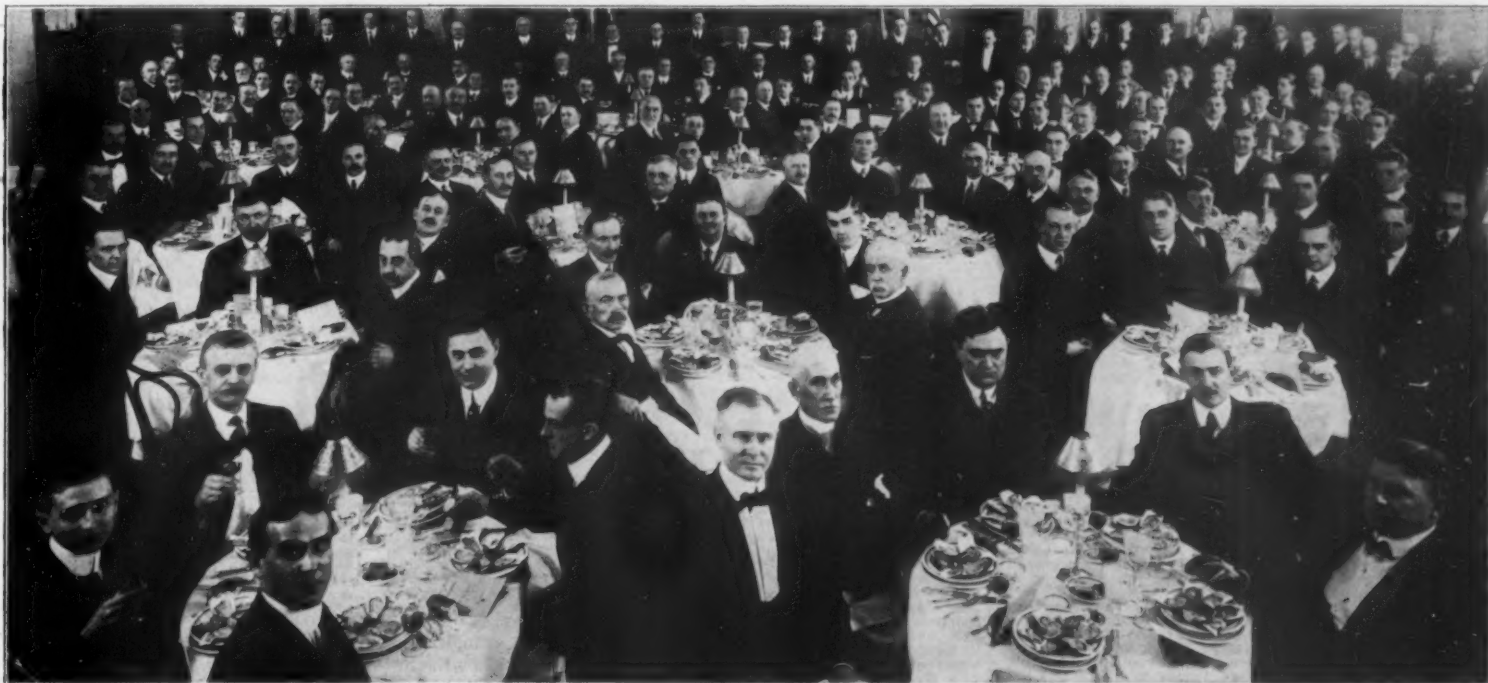
New York, March 19.—At the annual meeting of the Association of Dealers in Masons' Building Materials of New York, held at 18 Broadway, Thursday afternoon, March 18, Francis N. Howland, of the old established firm of Candee, Smith & Howland, was reelected president for the thirteenth consecutive time. The meeting was featured by an informal discussion of the problem now in issue between the cement manufacturers and dealers regarding trucking in New York City, and the new president was empowered to appoint a committee which he will announce later, to take this matter up for further consideration. The lighterage situation in this harbor was also informally discussed, but no action was taken, since the new tariffs have been suspended until May 1.

Empire State Dealers Ready.

All is in readiness and retail dealers of the Empire state are waiting for the annual meeting of the New York State Builders' Supply Association to be held at the Utica hotel, Utica, N. Y., on Wednesday and Thursday, March 24 and 25.

According to President George D. Elwell, a splendid program has been arranged and assurances have been received from a large number of retailers that the convention will be well attended. A large number of interesting subjects will be taken up for discussion, among them the division of the state into districts for the purpose of bringing together the dealers of the various districts. It is believed that this will enable retailers with kindred problems getting together at more frequent periods.

In addition to the business program of the convention entertainment features similar to those which the New York association has provided for its members in the past have been arranged.



AT THE ANNUAL BANQUET AND ENTERTAINMENT GIVEN BY THE LIME MANUFACTURERS' ASSOCIATION OF EASTERN PENNSYLVANIA TO PHILADELPHIA RETAILERS ON FEB. 16, 180 LIME MEN WERE PRESENT. THE SCENE OF THE ENJOYABLE FEAST, AS DEPICTED ABOVE, WAS KUGLER'S RESTAURANT, ONE OF THE POPULAR EATING PLACES LOCATED IN THE CENTER OF PHILADELPHIA'S BUSINESS DISTRICT.

West Virginia Retailers in Banner Convention

The second annual convention of the West Virginia Lumber and Builders' Supply Dealers' Association, which was held at the Chancellor hotel, Parkersburg, W. Va., on Wednesday and Thursday, March 10 and 11, was one of the most enthusiastic meetings ever held by retailers of building materials and the program consisted of features which would give credit to an organization many times the age of the West Virginia body. When the convention was called to order on Wednesday morning the association boasted of 62 members, which was an ideal membership for such a youthful organization, but before adjournment on Thursday this number had been more than doubled. As a result of the active interest of the retailers of the state, enthusiasm was prominent among the organizers and charter members.

The meeting was called to order in the convention hall of the Chancellor hotel, promptly at 10:30 Wednesday morning with President W. E. Minter in the chair. After invocation by the Rev. E. A. Culley, Mayor Allen C. Murdock welcomed the assembled visitors to Parkersburg. In extending the keys of the city to the association he made a brief but interesting speech to which W. W. Scott, of the Scott Lumber Co., Bridgeport, Ohio, responded.

President Minter, of Huntington, W. Va., then read his annual address, in which he brought out forcefully the necessity of general co-operation because of keen competition, increased costs and reduced margins of profit. The address in full follows:

This is the first annual convention of the West Virginia Lumber and Building Supply Dealers Association, and I am glad to see so many present. I am sure you will feel well repaid for your visit after you have attended this convention and have heard discussed in the very able manner in which they will be handled, many subjects of vital interest to each and every dealer.

This association had its beginning in the extreme southern end of the state. It started with a small monthly meeting of the supply dealers on the Norfolk & Western section, who met once a month and discussed matters of interest to each other. They found the results accomplished were so encouraging and of so much interest and benefit to all that they set their faces to greater tasks and your state associations is the result of those efforts.

This association held its first meeting in the city of Huntington in April of last year, at which time the organization was perfected, the constitution and by-laws were drafted and accepted and officers and directors were elected.

The object and purposes of the association were stated and it was easily apparent that the interest of the hardware dealers, the electrical and plumbing supply dealers and dealers in paints and general and special building materials of all kinds were identical with the lumber and building supply dealers and the invitation was given to come over and join forces with us and we are glad to be able to claim some of the most representative hardware, plumbing and electrical supply dealers in the state as members of our association. We now have a membership of considerably over 100 members and we have laid the foundation for a splendid association. If each member will put his shoulder to the wheel and help to push and boost we can accomplish more good for our business than most of us could hope for—though we were late in the year in perfecting our organization, last April, we have done a great deal in the few short months we have been in operation, and perhaps more than most of you know.

It was the fond hope of the directors, after working very hard for a long time, to be able to report at this meeting the passage of a lien law which would have saved the dealers of the state many thousands of dollars annually, but, unfortunately for us, it was attacked by some interests for political purposes and being nonpolitical in its aims and entirely neutral in its politics, it was torpedoed in trying to run the blockade in a very partisan legislature and was lost by a close margin.

Until this association was formed the interests of the dealer were ignored by many manufacturers and, although gross injustice was often done the local dealer, he was helpless in his efforts to correct these abuses and had to stand by and see the only business worth while in volume taken from him by the manufacturer and he was forced to go to this same manufacturer oftentimes to buy when he reached the point of wanting to replenish the stock for his store or yard.

This matter of building a fortune for our loved ones or even that of living and laying aside a safe amount to make one feel free from the pangs of poverty in the evening of life, when the shadows begin to lengthen to the Eastward, is a lifetime job and we cannot afford to make many mistakes in reaching the goal. Too well does every dealer know the folly of trying to compete successfully with his source of supply, yet until this association was formed we found ourselves in a large measure in this position. I don't mean that all of the manufacturers would disregard their duty to the dealer but there were enough who did come in and take such business as would develop in profitable volume or else establish such prices as would leave the dealer no profit.

The dealer was not the only one who would suffer

under this lack of organization in the past. A hardship equally as great was forced upon the wholesaler or manufacturer who did protect the dealer and attempt to market his products through legitimate channels—he and the local dealer would both lose. This condition held out a special inducement to the factory or mill to cut out the dealer and go direct to the consumer. If it were possible for the consumer to buy all of his supplies direct from the factory or mill at a saving, I would be the last one to raise my voice in protest, but the local supply house is just as much a necessity as a local telephone, or local drug store or grocery store and, being a legitimate business and a necessary business, as no one will dispute, the local supply house has certain rights and those rights should be respected.

I want to sound a note of warning here and now. It is this: we cannot guard those interests as individuals, it can only be done by a strong association in which every member is willing to do his part. It is the duty of every member of this association to demand a square deal from the wholesaler or manufacturer and likewise give the wholesaler or manufacturer a square deal. It is not a difficult matter for every dealer of this state to find out the policy of the firms you buy from. Write to the secretary; he is always glad to hear from you, and ask him what the policy of the people you buy from is in



G. J. DICKERSON, SECRETARY.
WEST VIRGINIA LUMBER & BUILDERS' SUPPLY
DEALERS' ASSOCIATION.

other sections. Your secretary can give you this information and he is always more than glad to hear from the dealers on association matters.

I wish I could burn into your memory the necessity for closer co-operation with your secretary. When you find you have anything of interest to yourself or any other member of the association, write the secretary and tell him about it; furthermore, I would say that he can only find out the troubles throughout the state as you report them to him. The secretary has been so successful in all of the matters he has undertaken that he is trouble hungry; he is just itching for new fields to conquer. Men are more or less alike the world over, and I believe if you find a man who is not straight, honorable and upright in one section he will not be different in other sections, if similar conditions and temptations should arise.

I do not believe there are very many cases where the dealer is mistreated by the wholesaler or factory that could not be corrected if a protest was lodged against such firm by a solid front from the supply dealers.

In entering a protest I believe the matter should be weighed through calm deliberation and no firm reported as being unethical in its transactions unless the facts in the case should warrant it after he is given an opportunity to be heard in the matter. I do not want our association to claim anything but what belongs to it and if we are to succeed it can only be on a fair and square basis or principle which recognizes alike the rights of both our source of supply and our customers.

There was a time when this was a very attractive line of business; it was not hard to make a good profit on our investment, but each year we see our cost of doing business increase—we have been compelled to add labor saving devices in the way of equipment and machinery, we have had to increase our investment in stock facilities, our competition has increased many times in recent years and our margins of profit have been trimmed closer and closer and our losses in bad accounts have grown larger until it has reached the point that if we are to continue in this line of business and succeed we can only do so by strictest economy and closest co-operation in the matter of credits and the elimination of lost motion in our business and by claiming by conquest the business which belongs to the dealer.

When one goes to the bank and tells the banker he needs money, the banker asks what security one has

to offer. That party accepts the question as a matter of business; he knows that the business customs require security at the bank. Is it always so in our business; do we always have our accounts secured before making shipment or delivery? I fear we do not and yet our margins of profit are so close that we cannot lose many accounts and come out at the end of the year with a profit. What is the reason for this and what is the remedy? The reason, I believe, is that in the first place we are all too anxious to sell and we have gotten into the habit of sorter-taking-chance-along with the contractor until it has become second nature or habit and we all know that it doesn't take a bad habit very long to get a hold on us. While this habit has been forming on us it has likewise been growing on the customer and contractor until they have reached the point that they become offended oftentimes if we ask for security. Our customers often tell us if we don't want to sell them on credit they can go across the street and get all the credit they want and prove it by doing so. The remedy for this is for the dealers on both sides of the street to demand that their accounts be secured. The reason the banks can ask and get security is because they all do it. It would be just as easy in our business (if each one in our line would do it) to require our customers, particularly on contract work, to secure our accounts and in that way we can eliminate one of the greatest drawbacks to our business, that of losses and bad accounts.

I fear we have grown to be too lenient and loose in our methods as an industry. I believe that losses in bad accounts and also the unknown cost of doing business with most yards, are two of the most important matters for consideration. I shall not attempt to cover these subjects, however, as we are very glad to have some of our wide-awake members down for these numbers on our program.

My term of office expires with the election of officers at this convention and I feel that I would be neglectful of my duty as president if I did not take this occasion to advise you of the necessity of each member becoming an active member—I mean active in the interpretation of doing something as a member. Some time ago I talked to a gentleman with reference to his firm becoming a member of the association and he told me that his firm belonged to several associations but he could not see that they got any good out of them. He said, "Tis true, we never go to the conventions or take any part in them except paying our dues." Now, we do not want this to be our experience. This association will benefit you, in a large measure, to the extent you participate in the workings of it. We could not expect our business to become a success by simply paying in our capital stock to the treasurer of the company and stopping there. We must have an organization; we must have workers and we must work. The church is the grandest institution of our land, yet if we simply pay our dues to the church and failed to attend its services, the church would soon decay.

As a rule our reward is measured by our efforts—we get out of most things the result of what we put into those things; we reap what we sow. The same is true with our association and if you will put your enthusiasm and hearty efforts into the work you will find a profitable field for your efforts.

Following the reading of the minutes of the previous meeting by Secretary G. J. Dickerson, of Huntington, W. Va., President Minter appointed a nominating committee composed of the following men: G. M. Mossman, Huntington; G. A. Grishaber, Charleston; A. M. Finney, Charleston; W. H. Klieves, Wheeling; N. N. Jenkins, Bluefield, and E. L. Davidson, Parkersburg. The morning session then adjourned.

Wednesday Afternoon's Session.

The many achievements of the past year were mentioned in a report by the secretary at the opening of Wednesday afternoon's session, which was held in the Parkersburg Y. M. C. A. The phenomenal growth of the association and the encouragement and interest given it by the retailers of the state made the report exceptionally interesting. Following this report, an account of the condition of the treasury was given by Mr. Dickerson who holds the dual position of secretary and treasurer.

"Coöperation" was the subject of an address by C. R. Garrett, of Atlanta, Ga. Mr. Garrett, who is a special representative in the southeastern part of the country for the Morgan Sash & Door Co., Chicago, is a thorough believer in the coöperation policy and advocated a closer fellowship between competitive dealers as well as between dealers and manufacturers.

W. H. Price, advertising manager of the United States Gypsum Co., Chicago, Ill., secured the undivided attention of the assembled retailers when he addressed them upon the subject of "Team Work in Selling." This address was the same as the one delivered by Mr. Price before the National Builders' Supply Association at its convention in Chicago last month, with the exception of additional

comments on the subject which the talk at the National meeting had inspired his first audience to make. The address is printed elsewhere in this issue.

W. H. Evans, general manager of the Parkersburg Builders' Material Co., created a general discussion at the close of an interesting talk on "Cost and Economy in the Builders' Supply Business." Mr. Evans who has been in the builders' supply business less than 18 months stated that he felt highly complimented when in being introduced the president said he had made a success of the business.

One of the first perplexing questions which Mr. Evans sought to solve after taking charge of the business, referred to "costs." Investigation disclosed the fact that in August, 1913, it was costing the company 42 per cent to do business. After much study and rearrangement of the methods of handling supplies and working material there was a reduction of 25 per cent, so that today this company is doing business on a 17 per cent basis.

He emphasized the fact that in order to make a success of business a man must know himself and his resources and how to use the things in his possession. He stated that every man has wonderful resources which could be used to great advantage if they were only brought to light. In illustrating these points he dwelt on the marvelous revolutions which electricity, steam, water and wind have brought since being harnessed by mankind.

Dwelling on economy he made the remark that 17 years of service in the employ of the B. & O. railway had taught him the full meaning of the word. It is not the big items that teach real economy, but the small and apparently insignificant details. He condemned cheap labor, calling it inefficient. A man who can be hired at exceptionally low wage cannot produce very much, because he is not in a condition to produce anything worth while. As a demonstration of the truth of this theory he explained that the force in his employ has been reduced from nine to five men and that with the present force he is doing three times the work formerly done. They are different men and better men than were formerly employed. They receive a higher wage, but everyone is a walking advertisement for the firm. If men are underpaid they are continually knocking and whether an employer realizes it or not they have their hands continually in his pockets.

Mr. Evans emphasized the fact that an organization must exist in every business and that where such an organization is lacking the cost of doing business is greatly increased. In a perfectly organized builders' supply business, especially where concrete blocks, brick and other products are made, it is valuable to inaugurate system and with its aid compare each day's work with its predecessor. In conjunction with this it is advisable to take a daily invoice of materials on hand, which can be easily done by figuring the amount of material received and the amounts sold or used. In connection with the manufacture of concrete products, Mr. Evans emphasized the value of consulting the laboratories of the various cement companies for the purpose of receiving accurate information as to the amount of sand the different cements will take. In this manner the cost of production is placed at correct figures and the quality of the material produced can be relied upon. Inaccurate information will either result in the use of a superfluous amount of cement or in skimping, which materially decreases quality of the product.

One of the most valuable assets that the builders' supply man may use in his business is truthfulness, according to Mr. Evans. He claims that being on the square with everybody is a great factor in a successful business.

Along this line he stated that it was not fair to have one thousand and one prices. He said that it is better to lose an order occasionally rather than tie yourself up to something you cannot live up to. He condemned the over-zealous salesman who is anxious to secure an order at all hazards, stating that there are too many of them who are in reality too big for their jobs. "They try to shine before they are polished to shine," said Mr. Evans.

He concluded his remarks by dwelling on the importance of having the office located in proper relation to the place where the business is being done, namely, the warehouse or yard.

In the discussion which followed, President Minter brought out the fact that his firm has learned that cost at least 25 cents per ton for the handling of plaster, bags, etc., and it is these little items that get into the costs. E. L. Davidson, of Parkersburg, called to the attention of the assembled dealers that nothing is made until they have gotten at least six per cent of the money invested.

A topic which was thrown open for general discussion was on the program under the title, "Needed Legislation." This brought up the question of the lien law which had been presented to the legislature and defeated, largely because it was not understood. At the conclusion of the discussion on the necessity of the lien law the questions of "Credits" and "Slow Pay" were discussed with the result that a committee was appointed for the purpose of preparing a resolution having in mind a uniform system of extending credits. The committee consists of P. M. Snyder, Mt. Hope; F. M. Mann, Huntington; H. E. Shadle, Charleston; E. L. Davidson, Parkersburg; W. H. Kieves, Wheeling; and G. M. West, Clarksburg.

Realizing the value of publicity and the advantages of securing the coöperation of the daily and trade press in regard to legislative matters and other items of interest to retailers, President Minter appointed a press committee as follows: G. Mott Mossmann, Huntington; J. W. Romine, Parkersburg; J. Timms Dowd, Parkersburg; I. E. Hodge, Charleston. The chairman also appointed a committee on general resolutions consisting of F. M. Mann, Huntington; C. A. Short, Shinnston; C. H. Whitescarver, Williamson; C. W. Pierce, Graham, Va., and M. Savage, of Charleston.

In an attempt to arrive at some systematic method of cost finding a committee was appointed to adopt a form to be sent to all members of the asso-

ciation containing questions whose answers, when received, will be used by the secretary in presenting to the association the different methods adopted in the state and the various percentages allowed by builders' supply houses for the transaction of business. This committee consists of M. Davidson, F. M. Mann, G. M. West, and N. N. Jenkins.

Banquet Exceptionally Enjoyable.

The annual banquet which took place Wednesday evening in the main dining room of the Chancellor hotel was in a class by itself. The entertainment committee in charge of J. W. Romine and assisted by J. Timms Dowd, had succeeded in securing a number of spell-binders for the evening, including the leading lights of Parkersburg and an ex-governor of the state. In addition to this a menu which consisted of everything desirable demonstrated the ability of the Parkersburg boys to pass judgment on edibles. There were at least 150 present.

When the last guest had found his place among the various tables, the room was suddenly darkened and the Auditorium orchestra, which furnished the music, struck up an air and a beautiful and melodious voice of a child singer rang out through the darkness of the expectant dining room. The song was "A Bowl of Roses." At the dramatic moment a spot light fell upon a large bowl of roses on a table in one corner of the room and a second later the head and shoulders of a beautiful little girl protruded through the mass of American beauties, identifying her as the possessor of the voice and the soloist who had entranced the audience. The girl was little Miss Eleanor Kinsey. When she had concluded her song she received an ovation such as perhaps never before had been given in the Chancellor dining hall. She responded with an encore and was then assisted from the table to be supplanted by her four-year-old brother George, who sang Tipperary to the entire delight of the banqueters. Mrs. C. R. Kinsey, mother of the children, was the accompanist and father, C. R. Kinsey, led the singing of the evening.

The menu was a tribute to the various interests identified with the association as well as to the chef. The various dishes were named in accordance



THE FIRST GROUP PICTURE OF THE BUILDING MATERIAL INTERESTS OF WEST VIRGINIA WAS TAKEN IN FRONT OF THE Y. M. C. A. BUILDING AT PARKERSBURG DURING THE RECENT CONVENTION OF THE WEST VIRGINIA LUMBER AND BUILDERS' SUPPLY DEALERS' ASSOCIATION.

with the diversified lines of building material as follows:

THE MENU

Yellow Pine Saplings
Fumed Oak Filler In Cups
Pickled Acorns
Hemlock Roots au Natural
Broiled White Pine Shad a la Huntington
Murphy's Julian, Charleston Style
Sweet Bread with Poplar Dressing, Maitre d'Hotel
Kiln Dried Cronstad
Frozen Cement
Slab of Roast Turkey with Painted Jelly, Bluefield Style
Spuds Mashed, au Clarksburg
French Concentrated Gypsum
Plaster Board Salad with Shingle Dressing
Face Brick in Mortar Color
Sawdust Cake
Fairmont Highballs
Wheeling's Pipe of Peace

Addresses of the Evening.

Following the dinner, President W. E. Minter, introduced Hon. H. P. Camden, of Parkersburg, as toastmaster. Mr. Camden congratulated the association upon the splendid banquet and in speaking of the lumber and builders' supply dealers called them "good timber" with "not a crooked stick in the lot." He then declared that he proposed to uncork a bottle of intellectual champagne (West Virginia is a dry state) to afford an inspiration to the evening's toasts. With additional tributes to his genius, the toastmaster then introduced J. Mentor Caldwell, president of the Parkersburg Board of Commerce. Verbal bouquets then became the order of the evening. Mr. Caldwell's description of the abilities of the toastmaster and the generous manner in which he lauded Parkersburg and humorously criticised Clarksburg and Huntington brought forth a remark from the toastmaster after Mr. Caldwell's speech that an outsider could understand why it was so easy to strike natural gas in the neighborhood of Parkersburg.

Following Mr. Caldwell, Secretary-Treasurer G. J. Dickerson, who hails from Huntington, humorously depicted the conditions of Parkersburg's narrow streets and boasted of the beauties and comforts of Huntington. He concluded with a few verses of his own composition with Huntington as their motif.

Former Governor A. B. White, was introduced as "Daddy" of the Board of Commerce and following the lead laid down by the other speakers spoke humorously, but from the consumers' standpoint.

H. E. Schadle, of Charleston, was introduced as one of the best pool players in the world and expressed his pleasure in being present at the convention and banquet.

The city of Huntington was again presented in a few lines of poetry when President Minter was called on by the toastmaster.

W. R. Scott, of Bridgeport, Ohio, was called upon to state why he persisted in retaining Ohio as his home state while he made his money in West Virginia. He stated that he considered Ohio the best state in the Union, although he expected that he would soon be compelled to move his residence from Bridgeport into West Virginia, to give room in that city for West Virginians, as he contemplated an influx into his home town with the arrival of saloons there next month.

W. E. Black, of the American Gypsum Co., Port Clinton, Ohio, proved to be an exceptionally well qualified after-dinner speaker. Well provided with anecdotes, he spoke encouragingly of the association and predicted its success. He was introduced to speak on the merits of material which his firm does not manufacture and, to the surprise of those not acquainted with the situation but to the amusement of his friends and acquaintances, he hardly mentioned the material of which he was supposed to speak.

The last speaker of the evening was G. A. Olsen, retail editor of Rock Products and Building Materials, who complimented the West Virginia organization on its remarkable growth and the selec-

tion of its officers and the various committees in charge of convention arrangements.

A specially prepared song book was at the side of each banqueter and under the guidance of Mr. Kinsey, jollity, mirth and good fellowship prevailed during the singing. Perhaps it was due to the familiarity of the tune rather than to the sentiment of the song that the following little ditty, which referred to the city across the river, filled the air whenever the toastmaster permitted a quiet half second to slip in:

It's a long way to Marietta,
It's a long way to go;
It's a long way over the river
To get a glass of beer!
Good-bye, West Virginia,
Farewell, Fred O. Blue;
It's a long, long way to Marietta,
To get Kentucky dew.

As a tribute to Parkersburg and members of the association who reside in the city, as well as to the entertainment committee, the following words were repeatedly sung to the tune of "Trail of the Lonesome Pine."

In the central part of West Virginia,
Where the lumber, oil and gas combine,
Parkersburg boys will treat you fine,
People have plenty where I got mine,
Old Town, like the mountains I am blue,
Like the rest, I'm lonesome for you,
In the central part of West Virginia
On the good old B. & O. line.

As a closing feature, the dining room was again darkened and as the assembled retailers sang "America" a large flag was gradually hoisted in the rear of the room with the spot-light showing to full advantage the solidity of color and the sentiment expressed in the "Red, White and Blue."

Thursday's Morning Session.

At the opening of Thursday morning's session, which was held at the Y. M. C. A., Attorney J. Roy Marcum, of Huntington, addressed the dealers on the "Mechanic's Lien Law." He reviewed the present statute and stated that it was antiquated by at least 25 years. He insisted that the business of the state has outgrown the law and there is general dissatisfaction among lumbermen and builders' supply dealers. It was Mr. Marcum who drafted the lien law bill presented to the last legislature and he explained the opposition to the bill by some of the law makers. He stated that the bill as presented had the endorsement of the State Board of Trade and several commercial organizations, but was sidetracked in the legislature because of partisan measures. At the conclusion of his remarks a general discussion on lien laws took place, showing the determination of the retailers to keep up the fight until an ideal law could be secured.

Jesse L. Cramer, a certified public accountant of Parkersburg, addressed the dealers on the "Value of Modern Accounting." Stating that for the past few years business has been bothered with increased costs and decreased profits and it is essential that the successful business man keep a strict account of all his transactions and whenever necessity requires it install new accounting systems.

Stereopticon views portraying gypsum products from the mine to the finished wall were thrown upon the screen and the working features of gypsum quarries, plaster plants and the manner in which gypsum products are made was thoroughly explained by W. H. Price. The pictures were especially interesting and showed the mining, crushing, grinding and calcination of the raw material, as well as the method of manufacturing hardwall plaster, plasterboard and gypsum tile. The pictures were taken in connection with the Alabaster plant of the U. S. Gypsum Co., which is said to contain the largest quarries and largest mill in the world.

Due to the illness of his son, W. E. Shearer, of Toledo, Ohio, was prevented from addressing the dealers on the subject of "Value of Supply Dealers' Associations from a Manufacturer's and Wholesaler's Viewpoint." Mr. Shearer is district manager of the American Cement Plaster Co., of Lawrence, Kansas.

Immediately after adjournment of the morning session, attendants at the convention lined up in front of the Y. M. C. A. building for a group picture. The usual mirth and congratulatory remarks concerning the appearance of the men to be photographed were not missing. An entertaining feature which will be remembered in connection with the picture was the attempt of several men in the front row to entice a stray dog into the picture as a mascot. The dog was either afraid of the retailers or the photographer, because he refused to pose.

Thursday Afternoon Session.

At the opening of Thursday afternoon's session, Mr. Brooks, of the West Virginia state forestry department, addressed the assembly on "Chestnut Blight." The retailers went on record as favoring a state appropriation to be placed in the hands of the forestry department to prevent the scourge.

A communication from the Ohio Builders' Supply Association, which referred to the resolution passed by that organization on Feb. 12, relative to the present basis of selling cement, was read and a similar resolution adopted. The text of the resolution is as follows:

Be it resolved: On this, the eleventh day of March, 1915, that it is the unanimous opinion of the members of the West Virginia Lumber and Builders' Supply Dealers' Association, in convention assembled, that the policy of the cement manufacturers allowing the sum of five cents per barrel to the dealers in handling Portland cement is not consistent with business principles and detrimental to the interests of both the manufacturers and the dealers and we ask the coöperation of manufacturers and dealers throughout the country in adopting a more liberal policy.

Gail B. Hamar, of Columbus, Ohio, representing the Lehigh Portland Cement Co., outlined the situation of cement manufacturers in relation to the present margin of protection allowed dealers and emphasized the fact that the manufacturers are ready to fully coöperate with the retailers when the dealers learn to protect their own interests.

Following a speech by G. A. Olsen, of Chicago, in regard to the importance of affiliating the state association with the National Builders' Supply Association, a motion was made by G. Mott Mossman, to refer the matter to the executive committee. The motion was quickly seconded and unanimously carried. It is apparent that West Virginia dealers realize the importance of affiliating with the National association and undoubtedly the recommendations of the Board of Directors will be to that effect.

The Board of Directors was instructed to carefully consider and take necessary action towards securing the services of an attorney as legal representative of the association.

Minter Re-elected President.

Upon the recommendation of a nominating committee the following officers were elected, with the president, vice-president and secretary-treasurer chosen to succeed themselves. The new officers are: President—W. E. Minter, Huntington.

Vice-President—George M. West, Clarksburg.

Secretary-Treasurer—G. J. Dickerson, Huntington.

Board of Directors: C. A. Short, Shinnston; A. M. Finney, Charleston; E. L. Davidson, Parkersburg; W. H. Evans, Parkersburg; G. A. Grishaber, Charleston; G. M. Mossman, Huntington, and Walter Perkins, Bluefield. Messrs. Short and Finney were chosen to fill the positions formerly occupied by W. H. Kleives, of Wheeling, and H. E. Shadle, of Charleston.

Realizing the splendid work done during the past year and with a determination to further increase the membership of the association, the following membership committee was appointed: W. H. Kleives, Wheeling; Mr. Purcell, Welch; J. Timms Dowd, Parkersburg; H. A. Davidson, Huntington; A. M. Finney, Charleston; C. A. Short, Shinnston; W. H. Evans, Parkersburg, and M. B. Sprigg, Weston.

(Continued on page 35.)

New Jersey Mason Material Dealers' Annual

The annual convocation of the Mason Material Dealers' Association of New Jersey for more than a decade has been one of the most actively bright spots of the opening spring season. Each succeeding year finds the Jersey dealers growing some, until their association represents about all that is good and progressive in the building material line in the state. They are justly proud of their organization, of one another and of themselves, as representing a large and important business in the most intelligent way. Their annual meetings have always been held at the Manhattan hotel in New York, which is a very comfortable place for such a meeting. The closing banquet feature, full of good fellowship, can be credited in a large measure to the banqueters, but the feast of things intellectual is due to the good judgment of Secretary J. M. Reilly, of Newark, who knows how to get up the brainfood program of a banquet better than any other man in the United States, judging only by the results he has produced at the banquet of the New Jersey Association.

Almost Perfect Attendance.

President Frank H. Genung, of Newark, called the meeting to order with nearly every member of the association present in the session that was open to members only. This is the executive portion of the meeting that is of no particular interest to the associate members.

Secretary Reilly read the minutes of the last meeting, which were approved.

Treasurer Agnew reported collections and disbursements, showing that all members have practically paid their dues to date.

On proper recommendation by the membership committee the John O'Rourke Co., of Orange, was unanimously elected to membership.

George A. Smock, chairman of the nominating committee, presented the following nominations:

Genung Re-elected President.

President, Frank H. Genung, Newark, N. J.
Vice-presidents, Thomas Miller, Newark; H. W. Voghte, Roselle.

Treasurer, Charles Agnew, Paterson.

Board of trustees (to serve for three years), Morton T. Brewster, Ridgefield Park; N. P. Stephens, Summit; E. L. R. Cadmus, Bloomfield; Joseph Brady, Bayonne; Elmer Blauvelt, Hackensack; N. W. Clayton, South River; (to serve for two years), T. F. Sayre, Elizabeth.

This report was signed by the full committee, Messrs. George A. Smock, E. L. R. Cadmus, and W. D. Gulick. Chairman Smock moved the adoption of the report and the election of the officers named therein. After some resistance on the part of President Genung, he was persuaded to stand for re-election. The report was accepted unanimously with great enthusiasm.

John M. Campbell, chairman of the necrology committee introduced the following report:

IN MEMORIAM.

In the affairs of an organization time can be relied upon to bring about changes and with each recurring session of our association we are compelled to reflect upon the uncertainties of life to deplore the loss of one or more of our associates.

It is an obligation we owe to those who labored with us to place on the records of our association an expression of regret for their loss and in doing this we realize our helplessness.

During the past year death has removed from our ranks the vice-president and one of the faithful, honest workers in building up and contributing to the influence of the Mason Material Dealers' Association, Mr. Uriah F. Washburn, of Jersey City.

From among the membership we have lost C. J. Smith, of Somerville, and it is but proper for us to make record of the death of the real founder of the association, the late Horace P. Cook, of Newark.

In the loss of these men each of us has lost a worthy and estimable associate, and the trade in general has suffered a loss.

Another loss, one to be deplored by all retailers as well as by many among the manufacturers, is that of A. F. Gerstell, late president of the Alpha Portland Cement Co. He gave the best proof of his sincerity to promote the good will and cooperation between the various sections of the trade and to none perhaps is more credit due for the benefits that are accruing to the mason material business than to Mr. Gerstell.

In filing this record we would add an expression of profound sympathy for the families of the departed ones.—Respectfully submitted, Committee, John Campbell, Isaiah Rolfe, Horace S. Osborne.

The open discussion of the matter of "Credits," as expressed by the question on the program, brought a lively debate. President Genung started the ball rolling by reading the question: "What rule should govern and what policy should dealers adopt to prevent law suits?" He then referred to the fact that practically every item of the dealers' account amounts to cash, and as such should be considered as a transaction in actual money. C. W. Ennis, Morristown; M. T. Brewster, Ridgefield Park; Walter C. Schultz, Hoboken; Col. Charles Agnew, Paterson, and Horace S. Osborne, Montclair, spoke on this topic with force and determination. The



FRANK H. GENUNG, PRESIDENT, NEW JERSEY MASON MATERIAL DEALERS' ASSOCIATION.

plan of keeping collections well in hand and well followed up was advocated by all of the speakers.

In natural sequence to this came the subject of "Competition," with the statement: "How bad debts, failure to properly fix overhead charges, and other elements of cost lead to underselling in price, causing unprofitable competition." The subject was reviewed in all its phases by M. F. Ellis, Bernardsville; William C. Salmon, Boonton; N. W. Clayton, South River; E. M. Rodrock, Paterson; Isaac E. Hutton, Bridgewood, and Isaiah Rolfe, New Brunswick.

Charles M. Kelly, of Providence, R. I., president of the New England association, was present and told briefly of the work of that organization, as well as of the recent meeting of the National Builders' Supply Association, held in Chicago.

Charles H. Cox, Phoenixville, Pa., secretary of the Eastern Pennsylvania association, was present and spoke briefly and in a fraternal way about the progress that they have been making.

Frank L. Johnson, of New Britain, Conn., was present with a few encouraging remarks.

Hon. William E. Tuttle, of Westfield, who is at once a dealer and an association member and also a member of Congress, told of the progress and the present status of the lien law, now in the hands of a committee at Trenton. He read the committee substitute for Assembly Bill No. 322, as it now stands before the Legislature. It follows:

An Act to amend an act entitled "A supplement to an act entitled 'An act to secure the payment of laborers, mechanics, merchants, traders and persons employed upon or furnishing materials toward the performing of any

work in public improvements in cities, towns, townships and other municipalities in this state'; approved March 30, 1892," which supplement was approved June 14, 1911.

Be it enacted by the Senate and General Assembly of the State of New Jersey:

The act to which this act is an amendment be and the same is hereby amended to read as follows:

1. The lien of any laborer, or of any person, persons, or corporation furnishing any material, hereafter filed under the act to which this is a supplement shall have priority over any assignment by a contractor or sub-contractor to any third person or persons of any money due, or to grow due, to such contractor or sub-contractor for any labor or material furnished for any public improvement referred to in said act, notwithstanding such assignment may have been made prior to the filing of notice by any such laborer, or by any such person, persons, or corporation furnishing any material, provided such money shall not have been paid to such assignee at the time of the filing of such notice.

2. The city, town, township or other municipality with whom any laborer, or with whom any person, persons, or corporation furnishing any material, may hereafter file any notice of lien claim under the act to which this is a supplement may serve notice upon the contractor against whom such claim is made, and upon any person who by the records of the municipality may appear to have any interest in the fund in the possession of the municipality against which such labor claim or claim for material furnished is filed, that such claim has been filed, and requiring the said contractor or person in interest to show cause before the governing board of such municipality within five days from the service of such notice why the said claim should not be paid. And unless, within the time so limited, the said contractor or person in interest shall file with the financial officer of the municipality a statement, duly verified, that the claim of the said laborer, or of the said person, persons, or corporation who has furnished material, is unfounded and untrue, and specifying in what respects the said claim is unfounded and untrue, the said municipality may pay, without the order of any court, the claim of such laborer, or of such person, persons or corporation who has furnished material, out of the fund in its possession upon which such laborer, or upon which such person, persons, or corporation who has furnished material, has a lien. The said city, town, township or other municipality shall be entitled to credit upon its contract for any money so paid, and shall not be obliged to pay the same to the contractor or any other person whatever; provided, however, nothing in this act contained shall be so construed as to in anywise impair the right of the priority of the claim or lien of any laborer as between the right of such laborer and any other claimant or person entitled to a lien.

This act shall take effect immediately.

STATEMENT.

The purpose of this act is to correct an evident oversight which occurred when the bill amended was drafted and passed, and to make the bill include material men, so that their rights, as well as those of laborers, cannot be defeated by an assignment of the contractor of moneys due under the contract. This amendment in no way is to impair the priority right of labor intended in the original act.

After considerable discussion and explanation the suggestion to provide for a lobby to look after the interests of the dealers at Trenton was very favorably considered.

Open Meeting Well Attended.

At this point the meeting was thrown open, after a 30-minute recess, and all associate members were invited to come into the meeting. The big room was well filled with the New Jersey dealers and representatives of the manufacturing companies composing the associate membership.

President's Annual Address.

President Genung, in his own forceful and impressive way opened the trade conference with a short review of conditions and the outlook immediately before the dealers:

Gentlemen, my heartiest and warmest greetings to you all, individually and collectively, this eleventh day of March on which we gather to hold our eleventh annual meeting.

If any members are unable to attend I sincerely hope it is not because of physical ailment but that their absence is due to some minor reason. We sorrowfully miss one member who was with us last year and who has since joined the ranks of the "Great Majority." Uriah F. Washburn was a member of our association since its inception and a member in its truest sense. He was always ready to lend a helping hand to any worthy project and do his share of the work without complaint. We mourn the loss of a worthy member and a good fellow. I am a firm believer in rotation in office and fully intended to rotate and make room for somebody else who could and would better represent you, but was persuaded to stick.

I have a mercenary object in wanting this association to accomplish all the good it possibly can for the retail dealer; I want it to have the best president its membership can produce, because, first and foremost, I am a retail dealer and I want all the benefits this association can give me. I have honestly tried in every way to further the interests of this association and my failure to accomplish much must be laid to some other reason than a lack of interest. In being re-elected to serve you another year I am not sure whether I am being rewarded or punished; but if it be the latter, I will strive none the less in your interests which are my interests also. Do you recall the fact that the Democratic Party, President Wilson, General Calamity and I got into office about the same time?

I have no desire to interject politics into my remarks, because, first, this is not a political meeting and, second, I have too much respect for the opinions



MEMBERS OF THE MASON MATERIAL DEALERS' ASSOCIATION OF NEW JERSEY ABOUT TO PARTAKE OF THE ANNUAL "SPREAD" AT THE MANHATTAN HOTEL, NEW YORK, ON MARCH 11.

of those whose political faith may differ from mine, but as every effect must have a cause and as business interests of this country began to go to the everlasting "bow wows" as soon as "I and my pals" took charge, it is obvious to me at least wherein lies the cause.

The Currency Law, Income Tax, Clayton Bill and other measures too numerous to mention, not forgetting the peaceful war tax, all have combined to create unrest, and we have suffered in loss of business and depleted pocket books, through a lack of confidence.

It has been my observation that many words in the English language that are not spelled as they sound (those words that the survivors in spelling bees in earlier days expected as a final test of efficiency) either stand for something disagreeable or ridiculous and among these I class psychology. We are told that the condition of business is psychological, simply a state of mind, and if we will only think business is good it is good or shortly will be. Those of you who closed your books on Dec. 31 and saw depleted earnings, if you were not unfortunate enough to find loss, saw nothing psychological about the result of a year's work and no amount of right thinking would have changed one figure in the result. There is nothing psychological about the building supply business in this country—it is about as bad as it can be and no longer confined to spots, but general in its scope. Thrift begets caution as well as riches and the thrifty ones who have money to loan for building purposes are giving full rein to their caution and withholding their assistance.

Money is necessary in all building operations and borrowed money is required in 90 per cent of the cases. Loans are not forthcoming and our business awaits restoration of confidence and it will come in due time, never fear, but those of us who in the meantime do not discover some means of conducting our business on a more economical basis or find new avenues for trade, will not be making the most of our opportunities. In studying overhead charges, one is prone to try to do without some things he thinks he can spare. Perhaps a membership in this association is one of them, but he will do well to give the matter careful thought before so concluding. "Where there is union there is strength" cannot be more fully shown than in an organization of this kind, which was created for the very purpose of uniting our voices in supplication or demand.

"The voice of the people is the voice of God," but while the faint cry of the individual unit may attract attention, it's the roar of the aggregate that demands it and gets it. Admitting we have not done as much as we would like to have done in forcing into recognition the principles for which this association stands, we have done infinitely more as an organization than you or I could have done individually. All of us lay more or less claim to the spirit of brotherly love and even to some degree cherish the esteem of our competitors (although my attention has not been called to this particular virtue being over-worked). We are our brother's keepers in a broad sense; we rejoice with him in his happiness, condole with him in his sorrow, but can hardly be expected to help him fight his battles or to look for his aid, particularly if any great distance separates us. While I may deplore the unkindness of some manufacturer in selling direct to Bernardsville and interfering with business that rightly belongs to our worthy and deservedly popular member in that famous hamlet of the elite and while I may have every desire to help him right the wrong, for what would my individual protest count?

There are 18 dealers in masons' materials in Essex county whose interests are identical and we have the power to make a manufacturer do the square thing if he wants to do business with anyone of us and that would be the condition. If all the dealers in New Jersey were members of this organization, but the dealer in Morristown can hardly look for more than sympathy from the dealer in Roselle, for the latter is not looking for business in Morristown and his protest might count for little, particularly if the manufacturer is not seeking business in Roselle.

With the association covering one-half of the state, its power to influence and keep manufacturers in the straight and narrow path, must be far greater than if left to individuals. The offender may not care a rap that the dealers in Trenton object to his wrong doing in Paterson, he may even be barred from doing business in Trenton, by excessive freight rates, but there probably are some dealers he does care about and nothing but an organization of this kind can give the publicity he fears.

Of course, it is generally understood that we have

been and are being hampered somewhat in giving out information regarding direct sales but we are not prevented from notifying the offender and using our kindly offices in preventing repetition.

In many cases this is all that is necessary, for the manufacturer has no way of knowing how much publicity has or will be given to the matter, even though it is not done in such a way as to be a matter of record of association work.

Our organization is just as able to do the work for which it was created today as it ever was and is just as necessary to the dealer. You and I can remember when it was common practice for manufacturers to sell direct in localities where the dealer did not handle their goods and in isolated cases it is still done, but we must admit that the danger of publicity deters a manufacturer now, who did not hesitate before our association was formed.

For several years we have had our principle trouble with the cement industry. Our association has struggled with this problem and attacked it from every known angle. We are truly living in a cement age and it is simply amazing how this industry has grown and the many uses that have been found for this wonderful product of American genius.

There are about 21 companies who are able to ship into this market, most of whom have immense plants with outputs that seem incredible and sales organizations that are marvelous in efficiency to find the markets. I have often wondered why, as retail dealers, we are given any consideration in the distribution of this product at all, yet we have been and are being considered.

New Jersey's Progress Inspires Others.

Two years ago this association started agitation along the line of determining what quantity should be considered strictly as a retail business and whether the manufacturer would protect the dealer in the quantity agreed upon. We were ignored in some quarters, assisted in others, yet were given to understand that New Jersey was only a "speck on the map" and that everywhere else conditions between manufacturer and retail dealer were entirely harmonious.

I have it upon the best authority that the action of little New Jersey attracted the attention of dealers nearly everywhere, with the result that six other retail dealers' associations covering territory east of the Ohio river and south to the Virginia line, took up the same question, showing very clearly that if harmony really existed it was of a one-sided variety.

In a spirit of brotherly love, I pause for a moment to condole with our cement friends in their present trouble, and do so in all sincerity. We had every reason to suppose that they were at least harmonious among themselves and did not dream they could get into a misunderstanding of a character, such as recent developments have shown us. Forgetting the past in the sorrow of the present, we really deplore the conditions that now exist and sincerely hope for a speedy restoration of confidence among them.

We, as retail dealers, have never questioned the price of cement; have never cared what we were charged for it, have never begrudged the manufacturer making a wholesale profit of 30 cents per barrel, but have always regretted that the sales policy of some manufacturers prevented us from enthusiastically working with them in exploiting the most wonderful product of any building age. Seven organizations invited the cement manufacturers to a conference and it was held in this room in September last and just seven manufacturers were represented. Nothing was done at that meeting beyond getting all exchange of views and the views exchanged were far more numerous than the attendants.

Manufacturers Plan to Adopt Definite Sales Policy.

Another meeting was held last week at which 17 manufacturers were actually represented and each of the 17 representatives stated that his company's policy was to put United States government, railroads and retail dealers in a class by themselves—all other purchasers and users to be charged an advance. Three other manufacturers who could not be represented were vouchsafed for as agreeable to the plan, making in all 20 out of a possible 21 who took a definite stand to benefit the dealers.

Now it is not my intention to go into the merits or demerits of the policy suggested. I realize that whatever policy is adopted, it would not be entirely satisfactory to all parties concerned, but I do claim, and I think justly, that it is no mean victory to get 20 manufacturers out of 21 to unite on any policy to benefit the retail dealers, and I claim that this was

made possible only by organization. While the feeble, but insistent cry of the association from the small state referred to as "the speck on the map" attracted little attention, it did spur into action six other organizations whose joint claim for recognition was heard and answered. This is an age of organization and it is an institution we cannot afford to ignore. I am much disappointed in the number of complaints of direct selling reported during the year. I feel sure that all have not been sent in that are known of and regret that our members take so little interest in this all important matter.

Quarterly Meetings Suggested.

Even if the complaints were simply placed on file (which I assure you is not the case) the members would be doing their part in sending them in and should. I'll venture the statement that I can ask every member in this room and get information regarding a direct sale, which he has not taken the trouble to report.

There seems to be a disinclination to sending in written reports, and I have wondered whether it would not be a good plan to hold quarterly meetings of the Association inviting and insisting upon members attending and telling of local conditions. Just getting together and exchanging views would more than pay for the inconvenience. Perhaps such a plan would get you better acquainted with your competitor. Perhaps you will discover he is not so bad after all; probably you can get a clearer insight into that incident of business that widened the breach between you, and will conclude that you were both wrong in heeding what was said by the innocent third party (the buyer), who had every reason for getting you at loggerheads with each other and keeping you so.

Come to Newark and I will show you one of the best credit associations on earth. It takes in all of Essex county and the lower part of Hudson. Twenty dealers in masons' materials out of a possible 21 are members of it, and we stand together as one man on questions of credit. Every member in it is a member also of this association and got his convictions of the advantages of organization from being a member of this body. Credit associations could and should be started all over our state. On matters of credit you have common ground to stand upon and you owe it to the honest and responsible contractor to protect him and yourself. The responsible contractor charges the dealer with putting the undesirable in business and keeping him there, and the charge has some basis in fact. We are apt to take a chance because of a fancied protection in mechanics' liens, a law that has cost us far more than we ever got out of it.

There is no part of your business system quite so important as the credits, but you will do very little individually towards putting them on a better footing, so long as you have the feeling that if you don't tell your competitor will. Get together, freely discuss the credit qualifications of the buyers, and when you discover that a certain one is not worthy of credit, don't give it to him.

Lobby at State Capitol Advocated.

Among other benefits that this association can, in my judgment, give to its members is a lobby at Trenton. Not necessarily an expressive one, but somebody conversant with the peculiar needs of our business, who would be on the watch to warn us of measures inimical to our interests; able to supply us with copies of bills introduced; tell us of committee hearings and generally keep us in touch with legislative matters that interest us.

We should have a live legislative committee, with power to spend specified necessary funds to call attention of all members pending measures, urging cooperation in writing senators and assemblymen, attending hearings and in other ways make known to our representatives what we desire certain bills to become law or not as the case may be.

Our legislators desire to serve their constituents honestly, but if they don't know what you want how can they act in your interests. On the theory that what is not worth asking for is not worth having, they are justified in deciding you do not want certain laws because you make no effort to convince them to the contrary.

The great success of labor in legislation matters is due to the fact that they are always on the job, fighting for their own and getting it and the failure of material men in protecting themselves against unfair measures is largely, if not entirely, due to lack of organization for that specific purpose. Of course, this association has always watched its mem-

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it's the easiest thing in the world to buy a mixer—but it's not always so easy to operate economically after you have it.

But if you buy a Jaeger Mixer, you are assured of satisfaction and economy. Made of strong, durable materials; with nine years of "mixer" experience built into it, and with a long list of satisfied customers, it is the best value on the mixer market today.



For Concrete, Mortar or Plaster
Four sizes, fourteen different outfits

The Jaeger Machine Co.

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Dealers
should add
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(See our
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THE Standard Brands

OF
Portland Cement

Lightest in Color
Highest Tensile Strength

ALWAYS UNIFORM

Always the same high quality. Prompt shipment guaranteed at all times and made possible, as each mill is located within switching limits of the two greatest railroad centers of the West. You are assured of your orders being promptly filled.



Reg. U. S. Pat. Off.

THE numerous details of manufacture that enter into the making of **Hercules Red Strand Wire Rope** are important factors in producing its uniform, long lasting and economical service. Some of these details are small in themselves, but when combined they make up the difference between a cheap rope and an economical rope.

May we send you our illustrated catalog?

57 Years in Business

A. Leschen & Sons Rope Co.

St. Louis, Missouri

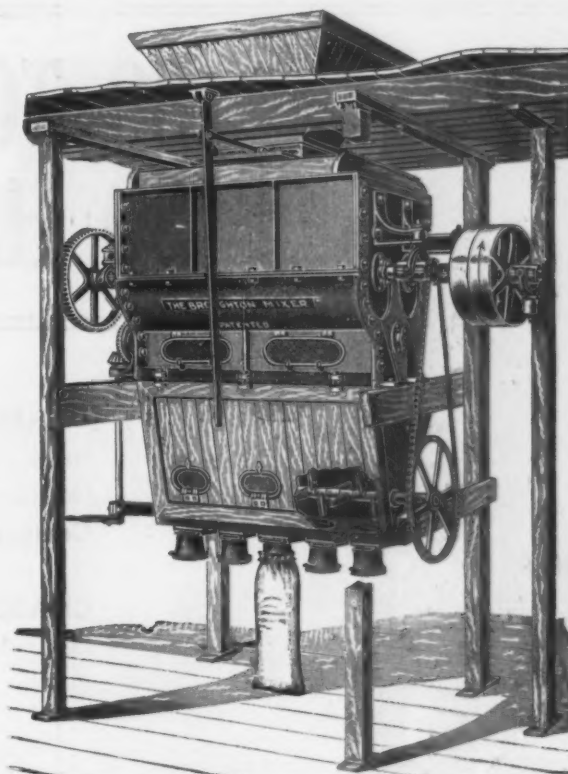
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Mixers of Plaster, Cement and
Dry Materials. Send for Circular.

W. D. DUNNING, Water St., Syracuse, N. Y.

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When Figuring on New Work
Why Not Specify "**IRONTON**" Cement?



Why?

Because of Its Beautiful Light Color
IRONTON PORTLAND CEMENT CO.
IRONTON, OHIO



Chabelco with K2 Attachment for
Bucket Elevator

SO TOUGH IT WON'T BREAK
SO HARD IT WON'T WEAR

CHABELCO Chain Belt is an all steel case-hardened bearing roller Chain Belt designed for the severest kind of service and for this reason is particularly well adapted for **Lime, Stone, Cement, Sand and Gravel Plants.**

CHABELCO is made in over 75 sizes and attachments and can be used for drives or for elevating and conveying purposes.

Send for Catalog No. 54 P. today

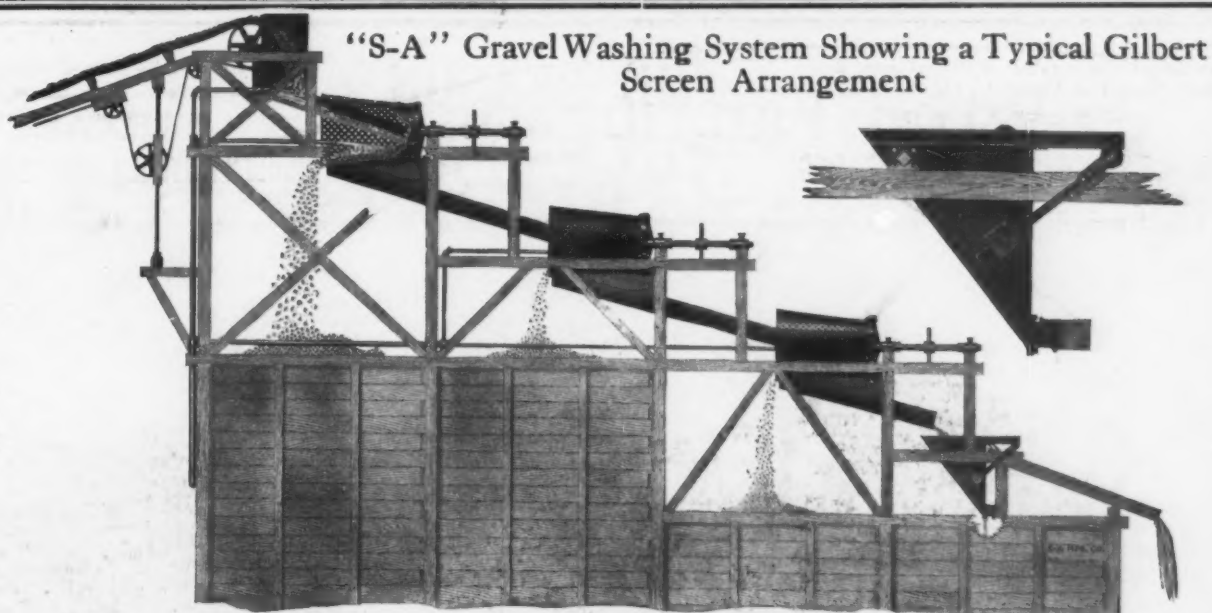
CHAIN BELT CO., 16TH STREET
MILWAUKEE, WIS.

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A Page
from
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Machinery
for
Screened
Products.

Have You
Received
Your Copy?
If Not,
Write
Today.

501



Concrete Gravel

Roofing Gravel

Torpedo Sand

Sand

This drawing shows the standard arrangement for producing three sizes of gravel and one of sand. The material is delivered into the hopper at the left by an "S-A" Belt Conveyor. The gravel falls into the chute below the hopper and is there met by a stream of water which washes it into the first screen. This screen rejects the largest size of the gravel. As the gravel works its way toward the large end of the screen, it is again met by a stream of water which washes and tumbles the small stones forcing the fine material through the perforations very rapidly. This process is repeated in the other screens, each time rejecting a finer product. The settling tank at the right allows the water containing the clay and loam to pass off through the overflow. The clean sand passes through the gate at the bottom into the bin.

STEPHENS-ADAMSON MFG. CO.

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New York, Chicago, Pittsburgh, Boston, St. Louis, Detroit, Salt Lake City,
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We design and manufacture conveying machinery for rock crushing plants, gravel washing plants, storage systems, etc. Also transmission and screening equipment, elevators, gates, feeders, car pullers.

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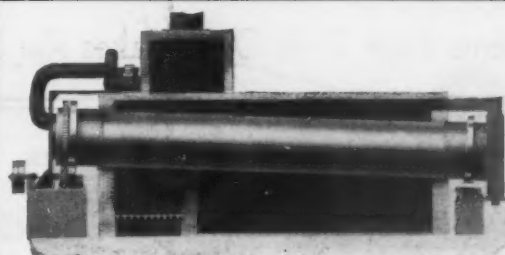
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MECHANICAL
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TRADE MARK.

SAME
Maumee Compound

For water-proofing cement
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4c Per
Pound

The Maumee Chemical Co.
PORT CLINTON, OHIO
Formerly — TOLEDO, OHIO

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS

New Gravel Washing Plant of Reinert Bros. (shown below), located at Algonquin, Ills., equipped with

"REXALL"

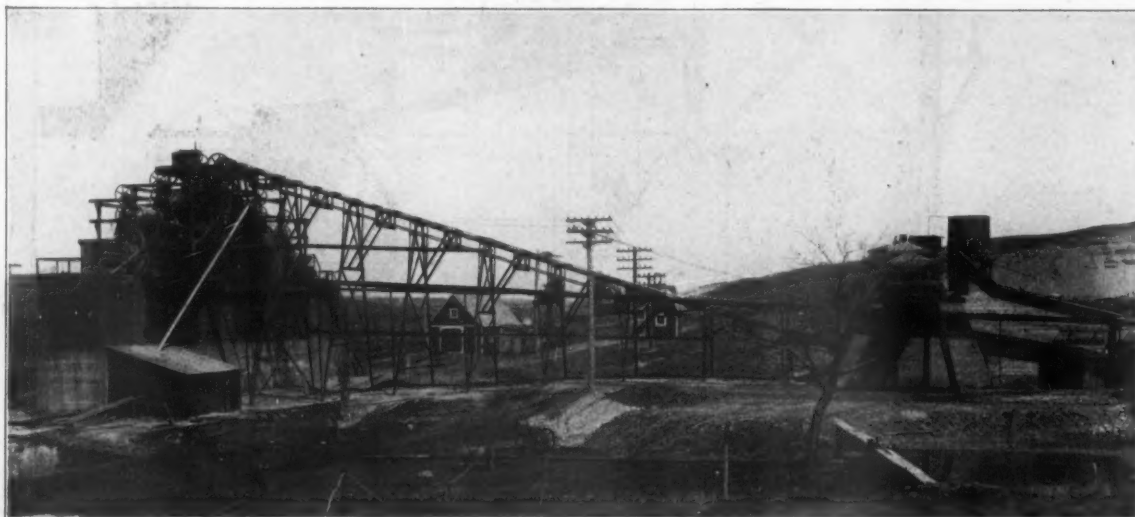
DOUBLE STITCHED CONVEYOR BELTING

**THE REASON
WHY** 

Four years service given at former plant of this company at South Elgin, Ills., equipped with 30"

"REXALL"

DOUBLE STITCHED CONVEYOR BELTING



MANUFACTURED BY

IMPERIAL BELTING CO. CHICAGO

(Advertisements Like This One Makes the North Western Line Easy to Sell)

CHANNEL LATH

Kno-Burn

Kno-Fit

XX Century

**These
4 Brands
of Lath
Come in
56 Styles**

One Account Means Less Book-keeping

And that cuts down your overhead and puts more money on the profit side of the ledger.

Our 4 brands of lath cover the field completely. Our National advertising has educated the public to their merits. We can ship promptly from our nearest distributing point. Our prices are always in line with the quality of the product.

All the North Western brands are made with the famous "Kno-Burn" mesh that imbeds itself in the plaster for absolute permanence. They have survived the most severe tests for fireproof quality. They are easy to apply and easy to plaster over.

Let us send you literature and prices today. Act **now** and be ready for Spring business.

North Western Expanded Metal Co.
929 OLD COLONY BLDG., CHICAGO, ILL.



Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS

bers' interests at Trenton to some extent; but the work cannot be done as effectively as it could be done by an efficient committee whose sole business would be to do it.

To make myself clearer on this subject, I am going to risk my judgment in making the statement that there are not three men in this room who can tell me the present status of assembly bill No. 322, which is an amendment to section one of the Municipal Improvement Act of 1892, which had the saving clause in it for material men killed by court decisions in 1908 and 1909. This is one of the most important measures ever introduced in the interests of material men, and you should know all about and be working tooth and nail for it.

Somebody please tell me something about it. Let me read you a letter concerning it from Hon. Arthur N. Pierson, assemblyman of Northfield, one of our best friends at Trenton, and one evidently more interested in your welfare than even yourselves. (Reads letter.) Am I right in asserting that you are not giving our interests at Trenton the attention they deserve? Would such a letter be necessary if we were? At our next trustee meeting I shall advocate action along this line as an added benefit to the members of this organization, and hope to be sustained.

Now, in conclusion, let our slogan be "Stick together." If there be anything in the axioms that "every cloud has a silver lining" and "extremes follow extremes" then in due time we shall see our cloud inside out and will forget our ills of today in the blessings the future holds in store for us. May God speed the day.

Advertising As Applied to the Dealer.

S. Roland Hall, advertising manager of the Alpha Portland Cement Co., gave an address on "Successful Advertising as Applied to the Retail Yard." This was limited to five minutes, but might well have taken an hour, for the speaker could only touch upon the many vital points of the value and importance of advertising that he was well prepared to give to the dealers in the most practical way.

Walter A. Fuchs, advertising manager of the Lehigh Portland Cement Co., cut his excellent paper on the same topic to five minutes owing to the press of time. His address will be published in a subsequent issue.

The president called on G. S. Brown, president of the Alpha Portland Cement Co., to say a few words, suggesting coöperation as a keyword of deep interest to all the dealers and manufacturers alike.

Mr. Brown commended the dealers for walking in the straight and narrow path that leads to heaven and at the same time deplored the reputed dalliance of all manufacturers in the broader way that leads elsewhere. He suggested, however, that cement manufacturers have recently felt considerable of a narrowness in their business and doubted not that the good dealers could make room for them among the good things of the promised land. He went over in a very comprehensive way the efforts towards coöperation that manufacturers generally, and cement manufacturers particularly, have made and are always willing to make in order to build up the best possible trade conditions.

Referring to the importance and indispensability of Portland cement, the speaker said: "Portland cement represents 35 to 40 per cent of the total operations of many dealers, and for that reason represents such a proportion of the tonnage handled and the money used in doing business, yet many dealers have used Portland cement as a decoy to attract other business and take no profit in cement at all. Even with the much criticised five-cent differential, it has been found that dealers do not even accept that much, but use their most indispensable product as a stool pigeon. This should not be the case. The dealer should add a reasonable profit to his cost upon every article sold, and this applies to cement more than any other item, perhaps.

In conclusion, the speaker said that his own company, and he felt that all other manufacturers of materials might be included in the same classification, were not only willing at all times, but anxious, to go the limit within the bounds of good business, to coöperate with the dealers in every good measure they have a mind to suggest. It is one purpose and one cause, the manufacturer and dealer alike, to so market the product that a reasonable profit can come to every man in the business, according to his connection therewith. Such a condition of business means the prosperity of the whole country, which is the main thing needed at the present time.

The Banquet.

After the menu, which was served delightfully, President Genung, acting as toastmaster, introduced A. V. Hamburg, president of the Newark Board of Trade, who spoke of all the good that has been accomplished by voluntary commercial organization. He commended the New Jersey dealers for their good businesslike method of doing things.

The next speaker, Alfred B. Cruikshank, is a New York lawyer and a firm believer in associations. He went so far as to recommend that the National representatives at Washington should be chosen by professional and trade organizations. He believed that in this way more expert representation could be secured and so improve that aim of the government.

The toastmaster next introduced Rev. Nathan Krass, a rabbi of Brooklyn, who spoke on "Civic Duties." A brilliant scholar and learned man, he handled the moral side of business life, using poetic metaphor and a story from the Talmud that was at once exquisite and instructive. Stressing service as the main duty of the business man and the good citizen, he closed gracefully with a verse that promised lasting reward for service.

Hon. Charles N. Fowler, introduced as the father of the Federal Reserve banking act, disclaimed any kinship whatever with the measure as passed. He said that it has been amended and altered before birth so that the family could not recognize the original intention. He pronounced the measure as now in operation as foredoomed to failure for the reason that there is no place for it in our business organism. It is a misfit, and must be promptly repealed before further serious damage to business is done. The speaker affirmed that the old Massachusetts banking system which obtained prior to the Civil War was the best thing of the kind that the world had ever known. That was the model used for the original bill as drawn for the reserve act and such a plan will have to be adopted before the needs of the country can be served. As one of the best posted men of the age upon matters pertaining to finance, his remarks were impressive and interesting.

Hon. William E. Tuttle, member of Congress from Westfield, N. J., closed with a short talk upon "Business and Legislation." He said that it has recently grown to be the custom to take a shot at the lawmakers in season as well as out of season and claimed for the lawmakers, sincerity in full measure and intelligence quite up to the average. In short, he took the ground that things could be a whole lot worse and that lawmakers can be depended on to do their part as loyal Americans all the time.

THE ATTENDANCE.

The following builders' supply members were represented, in many cases by two or more individuals.

Buchanan & Smock Lumber Co., Asbury Park.
John Bradys Sons Co., Bayonne.
Peter O'Connor, Bayonne.
Jagals, Inc., Belleville.
Conkling Lumber Co., Bernardsville.
Ogden & Cudmus, Bloomfield.
H. Salmon & Sons, Boonton.
L. D. Cook Co., Bound Brook.
I. H. Hoffman, Clifton.
Yellow Pine Lumber Co., Clifton.
John G. Demarest, Closter.
Otis Wright, Crawford.
Creskill Lumber Co., Creskill.
Dumont Coal and Lumber Co., Dumont.
James W. Pierson & Co., East Orange.
Otto Meyer, Edgewater.
T. F. & H. C. Sayre, Elizabeth.
Tuttle Bros., Englewood.
L. V. Ludlow & Co., Far Hills.
Otis Wright, Garwood.
Hackensack Coal and Lumber Co., Hackensack.
Huyssoon & Kipp, Hackensack.
Shields-Chamberlain Co., Hackensack.
Van Kauren & Son, Harrison.
Chas. S. Shultz & Son, Hoboken.
E. D. Vanderbilt & Co., Hoboken.
Trost & McMahon, Hoboken.
Lehigh Coal & Supply Co., Hoboken.
Perrine & Buckelew, Jamesburg.
Washburn Bros. Co., Jersey City.
John Grants Sons (Inc.), Lakewood.
David L. Miller, Lyons Farms.
C. W. Ennis & Co., Morristown.
Green & Pierson, Mine Hill.
J. S. Collins & Son, Moorestown.
Charles Wolfe, Newark.

Cook & Genung, Newark.
Builders Material Supply Co., Newark.
Tomkins Bros., Newark.
George F. Perry, Newark.
Frederick Bowden, Newark.
Charles E. Townley, Newark.
H. B. Solomon Co., Newark.
Rolfe Building Material Co., New Brunswick.
John O'Rourke, Orange.
Spotteswoode-Cusack Co., Orange.
Adrian Bakker, Passaic.
S. M. Brich Lumber Co., Passaic.
Campbell, Morrell & Co., Passaic.
Passaic Builders Supply Co., Passaic.
John Agnew, Paterson.
E. M. Rodrock, Paterson.
H. M. Post, Paterson.
J. D. Lolzeaux Lumber Co., Plainfield.
R. F. Oram & Co., Fort Oram.
Thos. Langan Lumber Co., Perth Amboy.
Brewster & Son, Ridgefield Park.
E. S. Carr, Ridgefield Park.
Isaac E. Hutton, Ridgewood.
J. S. Collins & Son, Riverside.
Bachman-Veghte Co., Roselle.
T. B. Miller & Co., Summit.
Chas. J. Smith (Inc.), Somerville.
H. B. Halsey & Co., South Orange.
N. W. Clayton, South River.
Edwin Demarset, Tenafly.
Osborne & Marsella Co., Upper Montclair.
Tuttle Bros., Westfield.
Gardner & Gardner, West Hoboken.
W. D. Gulick, Washington.
Thomas Henry, Weehawken.
A. J. Mowerson, Wyckoff.

Associate members were represented in many cases by the presidents of the companies and the sales managers, often several representatives being present from one concern.

Claycraft Mining & Brick Co., Newark, N. J.
Kreischer Brick Manufacturing Co., New York City.
Alpha Portland Cement Co., Easton, Pa.
Bath Portland Cement Co., Bath, Pa.
Blanc Cement Co., Allentown, Pa.
Atlas Portland Cement Co., New York City.
Comstock Lime & Cement Co., New York City.
Consolidated Rosendale Cement Co., New York City.
Dexter Portland Cement Co., Nazareth, Pa.
Edison Portland Cement Co., New York City.
Glant Portland Cement Co., Philadelphia, Pa.
Palmer Lime & Cement Co., New York City.
Nazareth Portland Cement Co., Nazareth, Pa.
Lehigh Portland Cement Co., New York City.
W. G. Hartnaff Cement Co., Philadelphia, Pa.
Pennsylvania Cement Co., New York City.
Lawrence Cement Co., New York City.
Vulcanite Portland Cement Co., New York City.
Farnum Cheshire Lime Co., New York City.
Woodville Lime & Cement Co., Toledo, Ohio.
Charles Warner Co., Wilmington, Del.
C. K. Williams & Co., Easton, Pa.
James B. MacNeal & Co., Baltimore, Md.
J. B. King & Co., New York City.
Monument Plaster Co., Harrison, N. J.
New Jersey Adamant Manufacturing Co., Harrison, N. J.
Rock Plaster Manufacturing Co., New York City.
United States Gypsum Co., New York City.
Niagara Gypsum Co., Buffalo, N. Y.
Empire Gypsum Co., Rochester, N. Y.
A. N. Pierson & Co., New York City.
Thomas Robinson & Co., Philadelphia, Pa.
M. D. Valentine & Bros. Co., Woodbridge, N. J.
National Slag Co., Philadelphia, Pa.
W. B. Abbey, Newark, N. J.
C. A. Andrews, Rutherford, N. J.
Charles N. Leo, New York City.
Rock Products and Building Materials, Chicago, Ill.

Buying Increased Supplies.

Boston, Mass., March 18.—Building permits in this city to March 20 included few large operations and almost came to a lull in the course of many refigurings brought out of the great February activity, which was spurred to unusual proportions for the building season now opening. Amusement enterprises seem to hold the lead, two moving picture theaters and the new park for the Boston National League world's champions, in Allston, the latter with grandstand of concrete to seat 45,000 persons being the main operations.

Dealers have been buying increased supplies in the jobbing market with confidence in the strong undertone to general construction manifest in Boston and all parts of New England. From Feb. 20 to March 20 more than \$10,000,000 of contracts were awarded and the total for the year to date is near \$25,000,000.

The annual automobile show, which ended March 13, brought many dealers among its visitors and they left some good orders in their lines in Boston offices. Among dealers here to the auto show were C. F. Gile, Newport, N. H.; M. R. Willis, of Paisler & Willis, New Bedford, Mass., and W. A. Knight, of Hall & Knight Hardware Co., Lewiston, Me. Charles N. Moulton, of East Charleston, Vt., on the Canadian border, was also in Boston last week attending the automobile show. Mr. Moulton has recently enlarged his merchandising to include supply lines. He bought stock of the Alpha Portland Cement Co. here.

NEWS of the TRADE

Conditions in Chicago.

Retailers of builders' supplies report that present conditions in Chicago are poor, but every dealer is looking for a good spring trade. The report of the building department for the week ending March 20 is very gratifying, as it shows an increase of more than 100 per cent over the same week of last year. There were permits taken out for 227 buildings at an estimated value of \$1,876,650 last week, while the same week a year ago produced but 128 permits valued at \$908,400.

There is only one cloud on the horizon, the trouble in building trades; but the situation there is much better than it was a week or two ago. In fact, it is rapidly becoming the belief that conditions among the building trades will be satisfactorily settled by an agreement between the employers and the unions. With this settlement in view, there should be nothing to stop the tide which seems to be setting in towards a surprisingly good year's market in the outlying districts. The outlook in the downtown district is not particularly encouraging.

During the last fortnight work has been commenced on the freight terminal to be erected for the Pennsylvania railroad. This is really the beginning of \$65,000,000 worth of work planned in conjunction with the erection of Chicago's new union depot. It was reported last week that the National Biscuit Co. is having plans prepared for an eight-story fireproof warehouse to cover the greater part of a tract consisting of 600 by 266 feet.

Quite a commotion was sprung when rumors to the effect that a building trust, composed of Chicago contractors and labor union officials, had been organized for the sole purpose of keeping outside contractors out of Chicago. From present indications the rumors were based on investigations of certain labor unions and are really without foundation.

Members of the Cook county Board of Commissioners are discussing the erection of a \$2,000,000 jail. If the plan drawn by the county's architect is approved it is expected that a bond issue will be recommended to take care of erection of the prison.

The first of May will see changes in the offices of the Hydraulic Pressed Brick Co. and Bonner & Marshall Co., both of which are located in the Chamber of Commerce building.

Building Construction Improves.

Building construction throughout the United States shows a material improvement over the recent past. This is in keeping with a generally improved condition as reflected in bank clearings and other factors used as a foundation upon which to base conclusions. Permits were taken out in 108 principal cities of the country, in February, according to official reports to Construction News, for the construction of 14,890 buildings, involving a total estimated cost of \$42,434,232, as against 13,548 buildings involving \$47,632,750, as compared with the corresponding month a year ago, an increase of 1,342 buildings and a decrease of \$5,198,518, or

11 per cent in cost. This is a most satisfactory showing considering that in January there was a loss of 26 per cent and in December 43 per cent. It will be seen, that there is not much to complain of in the February figures; a decrease of 11 per cent, while the volume of construction was greater, the latter more than offsetting the apparent falling off in cost because of the larger area of activity. A comparison of the seven months since the beginning of the war, showing a loss for every month, varying from 26 per cent in August last down to 11 per cent in the month just closed, with July of last year, the last month prior to the war showing an increase, and this just prior to the beginning of the war is interesting.

Cities.	No. of Bldgs.	1913 Estimated Cost.	No. of Bldgs.	1914 Estimated Cost.	% Gain.	% Loss.
New York City (Boro. Man. and Bronx)	510	\$ 8,537,864	638	\$ 4,047,323	111	..
Chicago	579	4,701,500	435	5,097,900	..	8
Boston	240	3,567,000	214	3,386,000	..	..
Philadelphia	124	2,574,910	65	1,794,905	48	..
Brooklyn	527	1,868,365	61	2,353,460	..	17
Cleveland	738	1,732,925	581	1,398,010	24	..
Detroit	408	1,307,215	353	2,020,850	..	57
Baltimore	221	97,363	244	417,748	134	..
Newark	156	955,391	121	1,247,933	..	23
Washington, D. C.	398	890,833	235	884,036	1	..
Minneapolis	296	811,495	178	498,063	63	..
San Francisco	457	807,936	449	4,574,381	..	82
St. Paul	109	797,054	85	371,444	115	..
St. Louis	500	701,022	415	908,082	..	28
Springfield, Mass.	81	692,985	47	292,765	136	..
New Haven, Conn.	80	674,855	38	291,754	131	..
Pittsburgh	379	608,644	158	2,010,568	..	69
Los Angeles	538	586,697	839	1,455,730	..	61
Cincinnati	963	499,645	691	316,315	..	38
Atlanta	306	471,961	215	335,391	41	..
Toledo	143	454,607	108	606,400	..	25
Milwaukee	124	409,036	128	578,496	..	29
Seattle	697	353,880	760	558,195	..	26
Oakland	213	328,934	279	429,192	..	23
Dallas	134	324,185	211	564,230	..	43
Portland, Ore.	247	311,740	573	605,530	..	49
Indianapolis	256	307,750	152	392,469	..	6
Buffalo	306	307,000	172	395,000	..	22
Louisville	142	283,220	93	163,500	73	..
Albany	128	277,115	118	300,650	..	..
Richmond	94	259,184	81	270,267	..	4
Birmingham	59	237,495	59	154,638	58	..
Norfolk, Va.	84	178,720	59	196,825	78	..
Denver	175	165,070	286	206,205	..	20
Syracuse	77	160,383	63	75,915	111	..
Columbus	119	153,350	108	225,915	..	32
Hartford	99	151,600	50	99,165	52	..
Salt Lake City	98	149,705	52	113,000	33	..
Birmingham	136,710	..	..	216,455	..	37
Cedar Rapids	123	133,000	30	145,800	..	9
Sacramento	103	123,807	103	100,691	28	..
Atlantic City	117,349	..	..	42,768	174	..
San Antonio	175	113,595	219	577,950	..	80
Akron	101	110,360	71	136,530	..	44
Erie	94	109,168	63	58,150	85	..
Grand Rapids	89	104,300	47	82,095	27	..
Worcester	74	104,220	28	104,820	..	..
Reading	49	102,873	36	95,750	76	..
Memphis	145	101,733	333	275,455	..	63
New Orleans	97,323	..	..	204,794	..	52
San Diego	128	95,900	280	100,290	..	41
Berkeley	60	91,660	81	100,691	..	7
New Bedford	65	92,955	41	111,823	..	17
Duluth	69	86,647	45	156,370	..	43
Evansville	97	84,433	58	129,256	..	37
Omaha	39	84,100	45	221,175	..	62
Fort Wayne	31	80,109	9	103,300	..	22
Youngstown	46	79,650	36	84,740	..	6
Haverhill	4	78,400	4	78,400	..	..
Savannah	38	74,000	42	113,850	..	35
Trenton	59	71,673	44	77,064	..	7
Wilkes-Barre	78	70,125	31	36,973	..	61
Lawrence	25	66,775	5	14,300	370	..
Springfield, Ill.	19	65,000	16	28,050	125	..
Nashville	365	63,705	43	79,885	..	18
Allentown	39	65,665	32	60,300	..	..
Des Moines	30	65,145	39	128,390	..	48
Tampa	86	58,055	199	109,820	..	47
Paterson	64	57,217	47	66,378	..	13
Tacoma	110	56,701	128	167,722	..	66
Brooklyn	27	56,120	25	41,890	34	..
Kansas City, Kans.	40	55,150	41	49,125	28	..
Peoria	17	51,750	15	45,600	13	..
Troy	23	47,445	19	36,966	76	..
Scranton	27	42,600	20	64,729	..	34
Elizabeth	19	40,184	13	32,210	73	..
Canton	24	39,550	17	37,250	6	..
Binghamton	100	38,871	34	73,003	..	42
Harrisburg	16	38,425	13	41,875	..	8
Topeka	13	37,770	31	47,405	..	20
East St. Louis, Ill.	23	37,070	36	35,370	..	61
Pasadena	89	36,531	113	38,033	..	26
Sioux City	30	36,130	36	36,875	24	..
Stockton	45	33,900	36	31,936	54	..
Chattanooga	154	33,116	178	108,925	..	69
Lincoln, Neb.	19	31,560	25	35,675	..	11
Auburn	..	30,010	..	750,390	..	..
Waterbury	..	30,000	..	48,000	..	52
Dayton	..	29,155	..	11,075	164	..
New Britain	94	28,565	10	3,620	408	..
San Jose	94	27,418	46	42,378	..	35
Pasadena	..	24,800	..	2,412	919	..
Spokane	22	21,725	35	24,123	..	10
Superior, Wis.	25	20,675	15	15,140	36	..
St. Joseph, Mo.	21	18,751	27	39,715	..	37
Albion	..	18,843	..	39,907	..	38
Niagara Falls	6	15,450	17	73,875	..	79
Dayton	27	14,453	29	49,970	..	71
Saginaw	19	13,075	19	13,465	..	8
Colorado Springs	20	11,523	25	113,910	..	90
Utica	12	7,975	14	19,050	26	..
Hoboken	3	6,690	10	178,084	..	96
Butte	16	6,193	15	61,700	..	20
Pueblo	9	5,700	23	45,200	..	87
Holyoke	5	4,500	5	13,800	..	67
West Hoboken	9	4,315	4	21,340	..	79
Schenectady	3	3,635	10	10,800	..	24
Woonsocket	8	1,783	8	11,000	..	54
Totals	14,890	\$42,434,232	13,548	\$47,632,750	..	11

Much Building in Cincinnati.

Cincinnati, Ohio, March 5.—The several conventions held recently at Chicago and Toledo have had the effect of stimulating to a marked extent the optimism of those who attended, as they returned feeling that there would be something moving, after all, in the near future; while the opening of bids for the construction of the new \$2,500,000 courthouse on Feb. 16 did much to make local men feel that things were actually starting off. Several good-sized jobs will shortly start up again if good weather keeps up, notably the big Mill Creek sewer, which is of reinforced monolithic concrete construction, and the handsome Western & Southern Life building, whose framework and floors were in process of pouring when severe weather put a stop to the work. These and other jobs will soon be in full swing again, provided only there is not a throw-back to wintry weather.

Michigan News.

Bay City—Meagher Bros. Co. has been incorporated, capital, \$30,000, to handle builders' supplies and fuel.

Detroit—The Aetna Portland Cement Co. has been awarded the contract to furnish the cement for the new factory to be built at Greenville by the Ranney Refrigerator Co. It will be a \$150,000 structure. The company recently suffered a disastrous fire, but within a week's time it was at work clearing away the debris, preparatory to the construction of the new building.

Difficult to Secure Loans.

New York, March 17.—The main trouble with building construction in the New York metropolitan district is the difficulty in getting loans. For some reason, not explained by institutional or private lenders, building loans are again bringing extra premiums. One company ready to go ahead with a big building project in the neighborhood of the Pennsylvania terminal in Seventh avenue had to pay three per cent premium on his loan besides the usual interest and broker's fee before he could get the money he wanted.

EVANSVILLE BUILDERS AWARDING CONTRACTS.

Evansville, Ind., March 18.—Recent contracts have been awarded to George H. Fuller & Co., Chicago, for the new Citizens' ten-story bank building, on Fourth and Main streets. Chris Kanzler & Son were awarded contract for the construction of the Lahr building, Fourth and Locust streets. Besides these two large buildings, which will be under way soon, requiring large quantities of material, the Kanzler company has a contract with the Public Utilities Co. and the M. J. Hoffman Construction Co. has contract for building a new addition for the F. W. Cook Brewing Co.

The Builders' Lumber & Supply Co. has been incorporated at Wausau, Wis., with a capital stock of \$25,000, to sell at retail lumber and a general line of building material.

WEST VIRGINIA CONVENTION.

(Continued from Page 26.)

Upon suggestion of Secretary-Treasurer Dickerson, and the motion of G. Mott Mossman, of Huntington, the name of ROCK PRODUCTS AND BUILDING MATERIALS was placed upon the honorary membership list of the association. The motion also makes this publication the official organ of the association.

The meeting adjourned sine die.

Visitors Royally Entertained.

In addition to the banquet of Wednesday evening, visitors at the Parkersburg meeting were most enjoyably entertained Thursday afternoon and evening. In fact, the entertainment did not cease until the last visitor left Parkersburg Friday morning. At the close of the Thursday afternoon session the guests were taken in automobiles through the principal parts of Parkersburg, including the business, residence and manufacturing centers.

The big feature of entertainment, which the committee kept perfectly quiet and modestly advertised under the name of "athletic entertainment," was a series of boxing matches staged at the Parkersburg Armory. There were two six-round bouts, neither of which resulted in a decision, but the climax came in the third bout when Paul Blizzard, weighing 135 pounds, was matched to meet "Kid" Fields, at 133 pounds. The referee announced that the battle was for the lightweight championship of West Virginia. The boys were fairly matched, but young Blizzard lived up to his name by going after his opponent in regular "Blizzard" style and with a left hook to the jaw just before the close of the first round, put him to sleep.

At the armory "soft" drinks and sandwiches were eagerly devoured between the various bouts by the enthusiastic onlookers, many of whom left the building barely able to talk because of hoarseness. The three bouts were evenly matched and demonstrated that prize fighting can be conducted in a manner not only producing entertainment for the guests but also teaching them the valuable features of self protection. This entertainment was under the auspices of Company A of the National Guards.

As the doors of the Armory closed on the last visitor, the retailers hurried to the Chancellor hotel where the lobby and parlor floors were practically given over to the conventionites. As the various trains left Parkersburg the ranks became thinned and finally all the remaining dealers assembled in a suite of rooms on the parlor floor where story telling and singing was enjoyed until the "wee sma" hours of the morning.

NOTES OF THE MEETING.

Two of the most charming and popular young ladies of Parkersburg were continually at the registration desk, ready to receive the names and addresses of visitors as they arrived and to pin upon their coat lapels the convention badge. To Misses Winifred Taylor and Emily Stewart is due great credit for the perfect registration. When the city of Parkersburg recently sought a slogan, it was Miss Taylor who received a prize for naming it the "Best little city on earth."

A suite of rooms known as parlors C and D, which were occupied by Ben McCausland, W. H. Price and H. W. Taylor representatives of the United States Gypsum Co., became in all reality headquarters of the convention. Taylor, whose home is in Parkersburg, persisted in seeing that every visitor to the city was enjoying himself to the fullest extent and succeeded so well that at one time in this suite of rooms there were 63 men. McCausland is a genuine entertainer and because of his 298 pounds he received attention whenever he passed around the cigars. While in the rooms, the guests found opportunity to compliment Price on his two addresses.

The names of Romine and Dowd will long be remembered by visitors to Parkersburg on the tenth and eleventh. John W. Romine, and J. Timms Dowd, assisted by E. L. Davidson, G. L. Dudley, G. P. Morgan, C. E. Lane, J. J. Shore and T. R. Cowell, all building material men of Parkersburg, are to be given credit for the royal manner in which they received, took care of, and sent home again, convention attendants.

Joe Russell was constantly to be found among the building material men; and he declares he enjoyed every minute of the convention. Joe is the Parkersburg representative of the Burroughs Adding Machine Co., but devoted the two days of the convention to the building material men, a great many of whom enjoyed the scenery from his six-cylinder Hudson.

While W. E. Shearer, of the American Cement Plaster Co., was unable to be present at the meeting, he was ably represented by P. G. Himmelright, who travels through West Virginia, and J. A. Undine, special representative, who is connected with the Toledo office.

"Scribo," as the ROCK PRODUCTS AND BUILDING MATERIALS' representative was called, felt as though he had met a long lost brother when he fell into the hands of L. A. Olsen, of the West Virginia Lumber Co., who have their offices in Pittsburgh.

George R. Lampton, was one of the five Chicago men present at the convention. Lampton represents the Curtis Door & Sash Co. C. R. Garrett, who is making his home at present in Columbus, was another sash and door man. Garrett was advertising the "Morgan" line. A. W. Bronson was another sash and door man from the "Windy City."

F. C. Shriver let the folks know that Morgantown was located in the state of West Virginia and is a fine little place in which to do business.

E. M. Bryant, secretary and sales manager of The Vitrolite Co., whose manufacturing plant is at Parkersburg was present with samples and descriptive matter of "Vitrolite," which he states is "better than marble."

Visitors at the Armory were somewhat disappointed when the advertised bout between Ben McCausland and C. H. Whitescarver failed to materialize. Ben got in the ring, but as a substitute Whitescarver sent in L. A. Olsen, a lightweight from Pittsburgh. Olsen drew blood from McCausland while preparing for the bout and was given the decision.

On the convention floor of the Chancellor hotel, E. M. Long & Sons, wholesalers of builders' supplies at Cadiz, Ohio, had a very attractive exhibit, in fact, the only one in connection with the convention. In their display room they had on exhibition columns, interior and exterior, fir doors and samples of stair and porch work.

Messrs. Black, McCormick and Toothman were the ever-present American Gypsum Co.'s representatives. Port Clinton, Ohio, was the word of the hour where one or more of these men happened to be.

Gail B. Hamar, of Lehigh, F. A. Brine, of Universal, and S. B. Steece, Jr., of Ironton, convinced the retailers that one of the principal building materials is Portland cement. Each, quite naturally, boosted the product of his particular company but all agreed that a retailers' association is the best thing possible for the dealers of West Virginia.

THE ATTENDANCE.

E. J. Adams, Birmingham, Ala.
A. L. Brown, Chicago.
F. H. Baker, Wampum, Pa.
Harold W. Becker, Wheeling.
W. D. Brown, Cleveland.
F. A. Brine, Pittsburgh.
J. M. Beall, New York.
Arthur R. Black, Port Clinton, Ohio.
C. R. Briggs, Marietta.
O. S. Bailey, Parkersburg.
T. R. Cowell, Parkersburg.
H. C. Crawford, Parkersburg.
J. W. Cook, Cumberland, Md.
J. L. Cramer, Parkersburg.

C. D. Coffman, Wheeling.
George L. Camp, Pittsburgh.
C. M. Callaway, Huntington.
G. L. Dudley, Parkersburg.
Lewis Dudley, Jr., Parkersburg.
O. O. Dougherty, Bridgeport, Ohio.
G. J. Dickerson, Huntington.
L. A. Dickerson, La Crosse, Wis.
H. A. Davidson, Huntington.
T. M. Davidson, Huntington.
J. Timms Dowd, Parkersburg.
E. L. Davidson, Parkersburg.
D. E. Evans, Huntington.
A. M. Finney, Charleston.
E. W. Grayson, Wheeling.
C. R. Garrett, Atlanta, Ga.
G. A. Grishaber, Charleston.
J. H. Hamilton, Parkersburg.
W. G. Huston, Parkersburg.
P. G. Himmelright, Toledo, Ohio.
G. D. Hawkins, Huntington.
I. E. Hodge, Charleston.
C. H. Holden, Parkersburg.
N. J. Jenkins, Bluefield.
Frank Jones, Roanoke, Va.
F. S. Skeen, St. Louis, Mo.
W. H. Klieves, Wheeling.
W. B. Kirkpatrick, Cincinnati.
C. W. Long, Huntington.
P. C. Lehman, Parkersburg.
G. R. Lampton, Huntington.
A. J. Lacy, Logan.
T. E. Lane, Parkersburg.
E. H. Mockbee, Cincinnati.
R. B. Martin, Parkersburg.
W. S. Mercereau, Parkersburg.
C. Morris, Wheeling.
A. C. Murdoch, Parkersburg.
M. E. McCormick, Gallipolis, Ohio.
John J. Minckmeyer, Wheeling.
H. W. Meyer, Wheeling.
H. D. McClintock, Greenbrier.
W. E. Minter, Huntington.
F. C. Mapher, Cincinnati.
J. E. Meadows, Charleston.
Frank N. Meauer, Huntington.
J. G. Morris, Parkersburg.
G. P. Morgan, Parkersburg.
G. M. Mossman, Huntington.
A. W. Nash, Pittsburgh.
G. C. Naugle, Huntington.
L. A. Olsen, Pittsburgh.
A. W. Pruitt, Birmingham.
O. S. Poyntz, Huntington.
C. W. Pierce, Graham.
Austin Proff, Charleston.
J. C. Russell, Parkersburg.
R. J. Ray, Weston.
J. W. Romine, Parkersburg.
J. J. Shores, Parkersburg.
P. M. Snyder, Mt. Hope.
G. W. Stephens, Wheeling.
R. L. Scott, Wellsburg.
W. W. Scott, Bridgeport.
H. E. Shadle, Charleston.
W. L. Savage, Charleston.
C. H. Toothman, Fairmount.
C. P. Thorn, Morgantown.
H. W. Taylor, Parkersburg.
J. A. Undine, Columbus.
C. C. Watterson, Parkersburg.
C. H. Whitescarver, Williamson.
A. J. Wyatt, Birmingham.
E. A. Wigman, Pittsburgh.
B. W. Ackles, Buckhannon.
J. M. Andrews, Columbus, Ohio.
G. O. Anderson, Parkersburg.
Dan S. Beebe, Parkersburg.
E. W. W. Bryant, Parkersburg.
Ed. O. Bower, Parkersburg.
E. W. Bettinger, Cincinnati.
A. W. Brownson, Chicago.
R. G. Beckwith, Parkersburg.
H. H. Crosby, Parkersburg.
H. L. Chadock, Parkersburg.
R. G. Castaneda, St. Louis.
George C. Danhart, Parkersburg.
W. B. Downs, Wheeling.
Mark Danby, Cumberland, Md.
E. O. Davis, Salem.
J. B. Dudley, Parkersburg.
C. W. Edelen, Parkersburg.
J. D. Ecker, Parkersburg.
W. H. Evans, Parkersburg.
C. W. Howell, Parkersburg.
W. C. Henry, Philadelphia.
Gall B. Hamar, Columbus, Ohio.
W. H. Heermans, Parkersburg.
J. E. Irvins, Pittsburgh.
Warren Myers, Parkersburg.
R. G. Martin, Charleston.
B. L. Long, Pittsburgh.
W. E. Mather, Parkersburg.
B. W. McElfresh, Caldwell, Ohio.
J. E. Marcum, Huntington.
H. H. Nelson, Parkersburg.
A. C. Nelson, Parkersburg.
George A. Olsen, Chicago.
W. H. Price, Chicago.
Charles L. Piser, Columbus, Ohio.
D. A. Raridin, Athens, Ohio.
F. J. St. Clair, Pittsburgh.
W. M. Smith, Parkersburg.
Harry E. Smith, Parkersburg.
B. Steece, Jr., Ironton, Ohio.
L. M. Seeds, Columbus.
F. C. Shriver, Morgantown.
M. B. Sprigg, Weston.
C. A. Short, Shinnston.
J. P. Senseman, Parkersburg.
T. A. Schultz, Columbus.
W. F. Schwartz, Lowell, Ohio.
W. W. Vaught, New Rochelle, N. Y.
G. M. West, Clarksburg.
Robert Wilson, Parkersburg.
J. Young, Parkersburg.
H. C. Schilling, Parkersburg.
George Ecker, Parkersburg.
R. W. Hartau, Columbus, Ohio.
J. Henderson, Clarksburg.
T. C. Skeen, St. Louis, Mo.
A. C. Lang, Canton, Ohio.
J. D. Fies, Columbus, Ohio.
Thomas R. Kerr, Norfolk, Va.
Joseph M. Murphy, Parkersburg.
A. C. Villers, Clarksburg.

CONCRETE

Massachusetts Institute of Technology Buildings

Even in these days of big things with cement, the new constructions of the Massachusetts Institute of Technology stand pre-eminent and are of great consequence. Not only is this true on account of the magnitude of the undertaking, but from the fact that it is a technical school in whose laboratories and testing rooms have been established the constants and co-efficients for all kinds of building materials. Years ago the fundamental figures for strains of materials were here determined. Here is one of the large Emory testing machines and in the adjoining laboratory there is no season passes without its group of experiments in the strength of one or another form of cement. When such an institution with its experience selects concrete for the skeleton of its structures, it is an endorsement of concrete that is of highest consequence.

As a suggestion of its magnitude, some of the figures from a recent report of vice-president Bushnell, of the Stone & Webster Engineering Corporation, will be to the point. The firm is composed of two Technology graduates, C. A. Stone, class of '88 and E. S. Webster, class of '88, and to their standard have been attracted numbers of graduates since their day. Both these men are in the Technology Corporation and when it was a question of the Institute entering into large constructions these men offered their advice freely and seconded this with most generous professional arrangements.

The Institute found some years ago that its present location on Boylston street in the heart of a busy city could not much longer house its activities. It was out of the question to think of expanding to the necessary degree on costly business land, so a location elsewhere was sought. The land selected comprises a tract of 50 acres in Cambridge, just across the bridge from Boston, the frontage of the lot being on the Charles river basin and its side on the great thoroughfare, Massachusetts avenue.

Here was begun the construction of the educational portion of the New Technology. There is to follow the structure of the Pratt School of Naval Architecture and plans are now being discussed for an important student group to house the young men and provide for their various activities, social and gymnastic. The whole outfit will cost

something like ten millions and will stand as among the most important works in construction in the country.

Mr. Bushnell's figures show that the over-all measurements of the educational group from east to west (along the river front) is 800 feet, and from north to south, about 700 feet. The rectangle comprised within the outer walls is 560,000 square feet or approximately 13 acres. The total floor area of the completed buildings is to be 730,000 square feet and the cubic contents something like 12,000,000 feet.

The concrete work is about 40,000 square yards, with between 4,000 and 5,000 tons of reinforcing steel. Eighty thousand barrels of cement are required, of which 10,000 were a gift of Edward M. Hagar, class of '93 of Chicago. The sand and gravel components are 25,000 yards and 50,000 yards, respectively. In addition to this there will be granite and limestone for outer wall facings and between 5,000,000 and 6,000,000 brick for walls of interior courts and backing for the limestone.

A single floor of the great educational buildings measures about three and one-half acres, and it is interesting to note that this big structure had its first run of concrete on April 9, 1914, at noon and by Dec. 1 the buildings that were in the group had reached the level of the roof. It should be said that an important feature in the educational structures is to be the central library, which with its Pantheon-like dome will touch an altitude of very nearly 200 feet. The progress of the great assemblage of buildings was striking to those who had occasion to pass that way at intervals, for at one time the average was about one foot a day in added growth.

The concrete outfit, with its lofty, lattice towers, has naturally been the most evident feature of the work. While the foundations have demanded something like 25,000 piles, it was all below ground and nothing to show popularly, so that the question was not infrequently raised, whether anything was going on at all, but as soon as the concrete level was reached, spectators almost waited to see it grow.

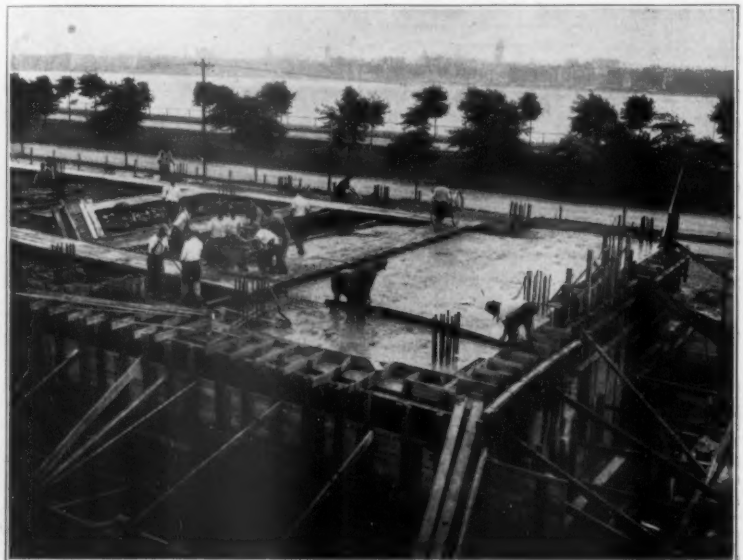
Incidental to the concrete construction was the lumber yard and sawmill. In the former there has

been stored at one time a million or two of lumber—more than most dealers carry in stock at any time, while the latter with its saws, planers, jointers and other equipment gave employment in the busy times to more than one hundred carpenters. The system of form making was such that the material was assured use some two and one-half times, while the technique of the construction permitted the column casings to remain in place longer than the other forms.

The way in which the different materials have been handled is an interesting study in efficiency. In the first place a system of parallel tracks was laid within the plot defining the outer lines of the main buildings. On these tracks the busy little Stowe & Webster engine that never leaves the grounds is incessantly placing cars with materials from the mills, the yards or the quarry, and much of this can be placed where it finally belongs with only one hoist. It has been estimated that in the hauling of the 300,000 tons of material that will enter into the buildings there will be a saving from this convenience of about \$100,000.

In the handling of the steel somewhat similar lines have been followed. The storage yard lies along the tracks of the Boston and Albany railroad, and the steel rods are lifted from the car to a long incline, down which they roll principally through the action of gravity. They fall into the first bin left open for them. They are snaked endwise from this bin by means of a little gasoline winch which lands them on the bending table. Here the only bending machine in the East shapes the rods to their purpose. Some of the larger sizes are bent over pins on a perforated bed. The steel is then delivered in cars wherever it may be wanted, and hoisted by the boom of the tower to the desired level.

The units for mixing concrete have attracted a great deal of attention from their condensed, labor-saving nature and their convenience. The sand and gravel are dropped from the cars through a trestle into contiguous bins. In the extended floor of these is the measuring hopper into which given quantities of sand and gravel are delivered. From the local cement house the bags come down a special run and the cement is here put into the aggregate. The hopper dumps its contents into a skip-car, which running up an inclined railway tips into the mixer where water is added. The mixer delivers its concrete to the hopper-elevator from which it is run through chutes or into barrels and delivered at its destination. The operations of preparing and pouring have attracted many specialists during summer and fall.



REINFORCED CONCRETE OPERATIONS AT NEW EDUCATIONAL PLANT OF MASSACHUSETTS INSTITUTE OF TECHNOLOGY, ONE OF THE MOST IMPORTANT STRUCTURES OF THE PERIOD.

Aquaria Made of Cement.

By Dr. Leonard Keene Hirschberg, A. B., M. A.,
M. D. (John Hopkins).

If there is any university, college, zoo experiment station, fish breeding bureau, or laboratory of botany or zoology that lacks an aquarium, I have yet to hear of it. With a recognition of this necessary equipment for marine and fresh water creatures and plants, Dr. G. E. Stone, of the Massachusetts Agricultural College in Amherst, Mass., looked about him for some improved method by which proper temperature, sunlight, and similar conditions could be maintained.

So difficult is it usually to carry over many water creatures and plants through the winter that often the whole aquarium becomes depopulated at the very time it is most needed. Dr. Stone's long and extensive experience with various aquaria, round, square, and globular, clay, glass, iron and wood, places him in an authoritative position, so that anything he has to say about them must at once attract general attention. Therefore, when he says that he has at last found an aquarium material that excels even the iron aquaria of 25 to 30 gallons capacity, everybody will wish to know just what it is.

Several aquaria were constructed by him, all on different lines, from cement. Some of these contained about 18 inches of water, others much more. Some only held nine inches.

An aquarium 12 feet long and 28 inches wide and eight and one-half feet high was made with cement over angle iron. It is in four sections, and the bottom is reinforced with one and one-quarter inch iron tubing. The main part consists of one large tank, and the illumination with glass, which extends half way to the bottom, is excellent.

After this aquarium was cast in cement, Dr. Stone covered it with pudding stone of small size to give it a rustic appearance. Peat, he says, is placed in little chinks left for the purpose, and in these are grown small vines, ferns, and marine plants.

These aquaria were built at a cost of less than \$12. They are first cast in frames and three coats of cement are used. The walls four inches thick are one part cement and two parts sand. An extra lining of half cement and half sand about a quarter of an inch thick is colored with lampblack which makes a better background than the lighter cement. Angle and T-irons, anchored by means of wires in the cement, afford support to the glass.

There has never been any sign of leaks in these cement aquaria, which is more than can be said of the older kind. Plants, fish, and other water animals enjoy these cement aquaria and never suffer any ill effects whatever. All that seems necessary is to wash out the newly built cement aquarium several times before filling it permanently. Thus all loose lime and other materials are carried off. These aquaria are far superior to any now manufactured and obtainable in stores. They are cheaper, home-made and can be built to conform to any available space, style of room, furnishings, or architecture. Most aquaria cost in the neighborhood of \$25, these of cement cost about half of this.

CONCRETE PAVEMENTS IN CHICAGO.

The concrete roads exhibit of the Universal Portland Cement Co., at the Cement Show last month, included a model of a concrete road under construction, showing the position of the mixer and the distribution of the working force. All details involved in the construction were shown, including a section of the old dirt road upon which the concrete is placed, a finished section of the concrete road itself, dirt covering for curing, stone shoulders along the finished section, pipe line for supplying water for mixing and sprinkling and all the machinery and implements.

A section of pavement from Bellefontaine, Ohio,

was shown. This was removed expressly for exhibition purposes. Copies of the original specifications for this pavement, found in the city engineer's records, show many points of similarity with present day best practice. A section of pavement from Woodward Avenue, Wayne County (Detroit), Michigan, which was removed to permit making a suitable joint with the new Seven-Mile Road, recently completed, was also shown, together with a section from Sioux City, Iowa. Each section shows how well concrete pavements withstand all kinds of weather and traffic.

One of the many advantages of concrete roads is the fact that this type of pavement permits of building the concrete curb integral with the pavement itself. A large chart has been made depicting this practice in various sections of the country. Another chart will contain diagrams of approved practice of concrete paving between street car tracks, a type that is meeting with increasing favor.

Chicago is an excellent place to inspect various types of concrete pavements. Within a short distance of the Coliseum, on Twenty-first street, near the lake, is a two-course, reinforced concrete pavement built to carry heavy traffic. This and the driveway in the business district of the American Steel & Wire Co., laid in 1903, and of Butler Bros., both near Canal and Randolph streets, show how well concrete pavements withstand heavy warehouse trucking. From 1908 to 1913, a total of 129,744 square yards of concrete alley pavements were laid in Chicago. These proved so popular that in 1914 alone the yardage approximated 125,000. Immediately outside of the city limits are many excellent types of the country concrete roads.

ADDS TO CONCRETE ROADS.

Milwaukee, Wis., March 19.—H. J. Kuelling, Milwaukee county highway commissioner, has announced that about five miles of the Beloit and Mukwonago roads will be improved, including 53,100 square yards of concrete paving, 135 cubic yards of concrete culverts and about 16,000 lineal feet of curb and gutter on the Watertown road.

The Milwaukee county board has decided to add nine more miles of concrete highway to the county's road system this spring. The board has awarded the Milwaukee General Construction Co. the contract to build a stretch of concrete road on the Kilbourn highway. The county board committee on highways has recommended Retzlaff S. Fromming to build a three-mile extension on the North Fond du Lac street roadway to the county line.

Mrs. Thomas L. Smith, wife of the president of the T. L. Smith Co., well known Milwaukee concern manufacturing concrete mixing equipment, died on March 15, at her home, 3015 Cedar street, after an illness of 16 months. Mrs. Smith was born in Watertown, Wis. She is survived by her husband and four children, including C. F. Smith, I. R. Smith, H. E. Smith and Miss Elizabeth Smith. Mrs. Smith was prominent in church and charity work.

Members of the Milwaukee Concrete Builders' Association are preparing to launch a campaign to convince the architects and builders of the advantages of concrete as an economical, structural and fireproof building material. Plans for the campaign were outlined at the annual meeting of the association, held at the Hotel Maryland on the evening of Feb. 5. It was the opinion of some members present that Milwaukee is behind other cities in adhering to materials that possess structural and fireproofing advantages. The following officers were elected at the meeting: President, James Silver; first vice-president, John Dahlman; second vice-president, W. A. Klinger; secretary, T. J. Baker; treasurer, Con Raulf, Jr.

C. D. Hightower & Co., 536 South Cox street, Memphis, Tenn., are making a specialty of round and square ornamental cement vases.

Effects of Salts on Concrete Strength.

Tests to determine the effect of sodium chloride and calcium chloride, separately and together, upon 1:2:4 concrete were made at the University of Wisconsin during the winter and spring of 1912 by H. E. Pulver and S. E. Johnson, instructors in mechanics. The test pieces were cured at temperatures of from 60 to 75 deg. Fahr., and below freezing.

All mix was by volume and the salts were dissolved in the mixing water. The test pieces were 4 in. cubes, and those cured at a temperature below freezing were broken after fourteen and sixty days, while those cured at normal room temperatures were broken after fourteen, sixty and three hundred and sixty days. Four pieces were tested at each age for each batch of concrete. Atlas Portland cement was used, and to prevent variation in the quality it was mixed thoroughly in the beginning and a sufficient quantity stored in air-tight cans.

The test curves show that as the percentage of NaCl is increased there is a nearly straight line decrease in the strength of the concrete cured under normal conditions. The effect of NaCl alone, when added to concrete cured at low temperature, is probably to reduce the freezing temperature, and hence retard the freezing of the concrete, thus permitting of its setting and hardening. The curves show an increase in strength for the addition of NaCl up to 12 per cent, after which there is a decrease. It may be that beyond 12 per cent the weakening of the concrete due to the excess of NaCl more than offsets the strengthening due to the reduction of the freezing temperature.

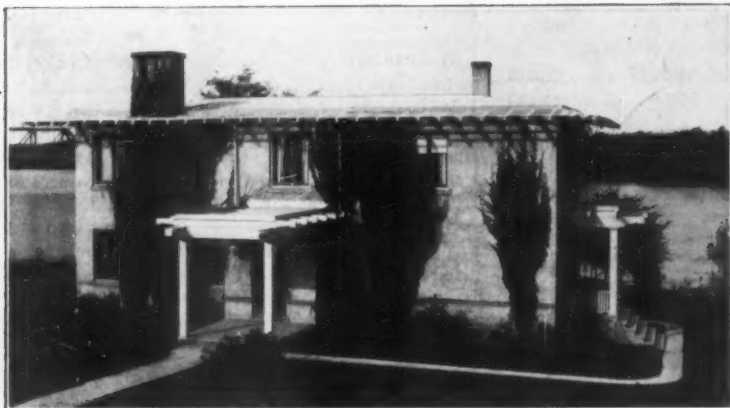
When CaCl₂ alone is added to the concrete, cured either at normal or low temperatures, the effect is to increase the strength up to about 4 per cent CaCl₂, at which point the maximum strength seems to be obtained. This increase in the strength of the concrete may be due to the acceleration of the setting of the cement by the CaCl₂. Serious disintegration was observed on the surfaces of the cubes cured at low temperatures with 6, 8 and 10 per cent of the CaCl₂. This disintegration did not appear on any of the cubes cured at normal temperature or where NaCl was used.

NOVEL CONCRETE CONSTRUCTION.

Built in the manner of a frame house but with all the parts of concrete instead of wood, a Los Angeles structure is unique in construction, says Building Age. All the material is poured in forms "at the job" so that none of the thin clapboards, two-by-fours or other parts will be injured in handling. The boards are reinforced with wire netting and are about as thick as the ordinary lumber used in building. While the concrete is soft, they are pierced at the proper points to admit the nails that attach them to the frame. The two-by-fours are reinforced with steel rods, as are the stair frames and other concrete timbers. The method of attaching the boards to the frame is original; to the outside of each two-by-four is wired a strip of wood just heavy enough to receive the nails. The concrete foundation is poured in ordinary forms as for any frame structure.

The air space between the outer wall and the plaster within is claimed to be a decided advantage, making for even temperature. Ease of setting up is also claimed for this style of building, for apparently there is nothing to it that the average carpenter could not handle. Of course, the "forms" are designed to be used repeatedly and are bolted together and taken apart without difficulty.

Plans are being made by L. R. Adell, of San Diego, Cal., for the establishment in Hanford, Cal., of a concrete pipe works. Mr. Adell has moved his family to Hanford and is now looking for a site for the plant, which will most likely be on the Santa Fe railway.



H. C. DEMITZ RESIDENCE. BROWN STUCCO FINISH. COST \$6,000.



JOHN T. STARK RESIDENCE. WHITE STUCCO FINISH. COST \$6,000.

Wisconsin Firm Develops Fine Type of Residence

In the whole field of development in the concrete industry there is none so important as that of the construction of the concrete residence. The greatest influence that the industry can ever have upon the civilization of the future lies in this direction, and while it was one of the first features to gain consideration in the newly aroused interests in the use of cement, about 12 years ago, the progress has really been but small as compared with that which is to come in the future. The first types of material that were produced were for the most part unsatisfactory, as might have been expected in such an entirely new adaptation of materials to a subject which was probably the first chapter of learning that mankind ever undertook at the dawn of history and one in which he has been progressing steadily through all the ages of civilization. The first great difficulty encountered in the production of concrete building materials was the misconception of the requirements, and a great many men who were unprepared to consider the essentials of construction made a great deal of material that was quite unfit for use for the purposes for which it was designed. Improvement after improvement was introduced until now there are several types of building materials manufactured throughout the country which are adapted for practically every structural use. The concrete house is now a possibility in practically every important community in this country, and the cost of the same is approximately parallel in figures to those of other good types of construction.

The accompanying illustrations exhibit several of the good residence jobs which have been constructed in the past few years by the Carey Con-

crete Co., of Grand Rapids, Wis. These are shown as typical average work which this concern is prepared to construct at all times, and they have built much more pretentious and more costly buildings.

W. H. Carey, the president of this company, for years has been a careful student of concrete and the uses of cement. Several years ago he equipped his plant with the Zagelmeyer system for making poured building blocks, as well as a very full line of specialties and ornaments incidental to the construction and decoration of the higher type of comfortable and safe homes.

On account of the wide popularity of the so-called stucco surface, nearly all of the best residence work that this company has handled has had that kind of finish. The walls are built of plain, squared surface blocks, which are rough enough to hold the stucco finish firmly and make a rigid and unchanging surface for permanently carrying the same.

Mr. Carey, who was at the Chicago Cement Show, said that the company had been in business for four years and that they have increased the volume of their business steadily each year. In 1914 they did a little more than double the business of 1913, which clearly indicates that the Carey Concrete Co. is delivering the goods. He further stated that the outlook for work during the coming season was much greater than they had ever known in the past for the reason that a large number of the best architects are regularly specifying the material manufactured by this company. The very creditable achievement of the Carey Concrete Co. shows what a good man, who studies the concrete business, and being in a position to command good

aggregate material, can accomplish in the way of building up a dependable business. Incidentally, it helps to develop the great concrete industry along the most important lines of its ultimate destiny, namely, the giving to all the people safe, sanitary, permanent and beautiful homes.

Kansas City to Build Harbor.

Kansas City, Mo., March 19.—One of the larger pieces of work involving concrete in Kansas City this spring will be the building of artificial banks for the Kaw river at its mouth, conforming with the dikes already built upstream and with the new harbor lines. The contract will be let jointly by the government and the Kaw Valley Drainage Board. The latter board let a contract a year ago for the removing of earth and other obstructions between the new harbor lines where permanent dikes are in use, and also in the same contract for the building of the dikes at the mouth. The government objected to the latter part because it had not advertised for the work for which it would help to pay, and new bids will be received soon. The work will be the same as that on the dikes upstream—piling and mattress work, the paving being slabs of concrete. In the Missouri most of the revetment is paved with one-man stone, but the Kaw dikes are designed to help the river scour its channel with absolutely no danger of getting behind the banks. The Munn & Reese Construction Co. had the big contract, let a year ago, and is now completing the clearing of the channel, being hampered somewhat the past few weeks by bad weather and high water. This company will probably be a bidder for the construction part of the contract. J. W. McMurry and Farney & Landis, it is said, may also be bidders.



W. F. KELLOGG RESIDENCE. BUFF STUCCO FINISH. COST \$20,000.



C. E. BOLES RESIDENCE. BROWN STUCCO FINISH. COST \$5,000.

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WANTED—Position as superintendent; 20 years' experience erecting and operating stone crushing plants. Reference. Address Box 1042, care ROCK PRODUCTS AND BUILDING MATERIALS.

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WANTED—Position as quarry superintendent. Acquainted with all kinds of operating, including steam shovels, crushers and lime. Best of references. Address Box 1044, care ROCK PRODUCTS AND BUILDING MATERIALS.

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Manufactured by **C. K. Williams & Co.**
Correspondence Solicited Easton, Pa., U. S. A.

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Milwaukee, Wis.

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WANTED—Location for a wholesale and retail sand and gravel plant. Might buy out a good going business. Address: **H. C. Lynch,** Independence, Iowa.

FOR SALE—About 200 acres, large deposits of Limestone and Clay; especially suited for the manufacture of Portland cement, as shown by analysis; also suitable for brick manufacturing or lime manufacturing plants. Located on the west shore of the Hudson River, ninety miles from New York City. Plenty depth of water for any size vessel on river channel. If interested, address Lock Box 125, Kingston, N. Y.

The quarries and entire property of the Moline Lime, Stone & Cement Company, located at Moline, Kan., will be sold at auction by the Trustee, in the Federal Building, at Ft. Scott, Kan., on March 27, 1915. **RAY E. COPE,** Trustee.

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CEMENT

Price-Cutting Still Obtains.

New York, March 17.—The Portland cement situation here is no clearer than it was a month ago. There have been ramifications, however, which have given rise to reports of an early cessation of the price-cutting tactics that have been taking the heart out of the trade in this market for nearly three months. One thing of a definite nature is the fact that prices have not dropped below the 58-cent mill level created when prices here were quoted at \$1.23 alongside of dock in wholesale quantities.

The Edison Portland Cement Co. has no further statement to make regarding its plans. The Atlas company has thrown into service 14 additional kilns and the Lehigh Portland Cement Co., which is said to have taken care of considerable Edison business following the indefinite closing of its New Village, N. J., plant; thrown in 18 additional kilns in the latter part of February and this week began to employ the remaining 10, making this plant conspicuous in the district as one operating 100 per cent of capacity. The Lawrence Portland cement plant at Siegfried is operating steadily, not having closed down at all this winter for repairs. The Alsen's Hudson river plant has been undergoing repairs and it probably will be operated at increased capacity within a week from date of publication. This plant has never been shut down except for repairs or because of an accident for many years.

Speaking of the situation regarding the outlook for his company, William P. Corbett, secretary and general manager of sales of the Alsen's Portland Cement Co., made this statement: "We are, as usual, preparing to run our plant at full capacity—in fact, have started. We have not shut down our plant at all, except for necessary repairs, during the winter months, or because of some accident for several years. We have had contracts and have some left today which are netting us 40 cents a barrel, actual figures, above the present figures obtainable at the Lehigh Valley mills, at which they are actually selling for present delivery and some for future delivery with an outrageous disregard for stockholders. Now that navigation has opened we are already loading out boats, and, among smaller ones, have a single contract at old and profitable prices which will draw 1,000 barrels a day.

"It has, of course, been a fact that on new business we have not been able to sell our cement during the winter months, when we lose our advantage in freight rates and have to meet the valley prices and get cost for our production. Neither has any other mill in New York state or in the valley during this bitter war for the survival of the fittest been able to sell its product at a profit.

"With a reduced general consumption, some companies began to cut prices at or below cost last Fall. The market became steadily worse and the standard companies finally were forced to cut to an unreasonable extent to make sales and to keep their organizations together. Now with the re-opening of business and of navigation on the Hudson, our plant, as usual, is starting operations and expects to continue as customary throughout the year until next winter.

"As to your inquiry regarding the German Alsen company, a separate corporation, the last report we heard from them was to the effect that they were busily at work and were getting liberal orders from the German Government at satisfactory prices.

Their cement is, of course, very favorably known to the Government and tentative propositions were made some time ago whereby the Government proposed to take over almost the entire Alsen output, thus keeping its organization intact rather than force an enlistment in the army, which would curtail production. It might be well to state now that the German Alsen Cement Co. and the Alsen Cement Co., of New York, are two separate and distinct concerns. The German company is not in the remotest degree sustained by the American company. In fact, we have remitted them far less than usual, for the simple reason that we have naturally sold much less German cement for some time. What little German cement we can ship goes to South America, Mexico or elsewhere since the beginning of the war, and has to be shipped by way of Copenhagen with an additional rail freight, and we have attempted to do very little business except with the stock we had on hand. As far as this company is individually concerned, and except for the somewhat curtailed general consumption, we would not be aware that this great war existed in Europe."

Fredenburg & Lounsbury, district agents for the Allentown Portland Cement Co., at New York City, sent out announcements to the trade March 17 that beginning the following day the price of its cement would be advanced five cents a barrel. This makes the New York quotation for this brand \$1.28 and approximately 68 cents, mill.

The Alpha Portland Cement Company has enlarged its offices at 50 Church street, New York.

Proposed Cement Packing Law Killed.

A measure introduced in the California legislature on Jan. 8 by W. A. McDonald, entitled, "An act to protect the health of persons employed in handling Portland cement and to provide for the manner of packing same," failed to carry when voted upon by members of the legislature on Thursday, March 18.

The phraseology of the measure, which had as its sole purpose the creation of a law compelling the use of dust-proof containers in cement sacks, was as follows:

Section 1. All Portland cement manufactured in this state, shall be packed in paper sack containers or other equally dust-proof containers, and the commissioner of the bureau of labor statistics shall have the power to issue orders to prevent the loading or unloading of any Portland cement in or for any vessel in any port in the state of California, or in or for any freight cars, or any railroad or railway in the state of California if such Portland cement is not packed in the manner herein provided, and any person, firm or corporation who shall disobey such order shall be guilty of a misdemeanor.

Sec. 2. Any person, firm or corporation who shall violate or fail to comply with the provisions of this act, shall be guilty of a misdemeanor, and shall, upon conviction thereof, be punished by a fine of not less than fifty dollars or more than two hundred dollars or by imprisonment for not more than sixty days, or by both such fine and imprisonment. Except, however, in case of corporations, the imprisonment when imposed, shall be imposed upon the officers or agents thereof committing such offense, or causing, suffering or permitting the same to be permitted.

Sec. 3. The commissioner of the bureau of labor statistics shall enforce the provisions of this act.

There is a Buffalo combination that has lately bought a number of farms near Bowmansville, on the West Shore Railroad near the city, which tract is to be used for developing a big cement operation, but no name is given out and those who know anything about it say that nothing is to be reported direct at present.

Will Electrify Plant.

Louisville, Ky., March 18.—Manufacturers of cement feel certain that business this year will be exceptionally good. A good deal of concrete work is in sight, both in building and contracting lines, and the demand for cement should run considerably in excess of that of last year. Street work locally will take a larger quantity than usual, it is said. The government is also doing a lot of work on locks and dams within a few miles of Louisville.

William S. Speed and Henry S. Gray, of the J. B. Speed Co., of Louisville, are interested in the Electric Service Co., a new concern which will light the streets of Milltown, at which point the Speed company has some big interests. A franchise has been granted and the town, as well as the Speed works, will soon have electric light and power from the central station.

The Clinchfield Portland Cement Co., of Kingsport, Tenn., recently let a contract to the Oliver-Hill Construction Co., of Maryville, Tenn., for the erection of a new plant to cost \$50,000. All machinery and other contracts have now been let.

ENLARGING SPOKANE CEMENT PLANT.

The International Portland Cement Co., of Spokane, Wash., has completed the installation of additional pulverizing machinery at the factory and has increased the raw delivery capacity at the quarries to such an extent that the possible output has been about doubled. As soon as work now under way is completed the plant will have an output of 2,000 barrels per day. At the last stockholders' meeting the following officers and board of directors were elected: Joseph S. Irvin, of Ottawa, Canada, president; R. K. Neill, of Spokane, vice-president; John P. Hartman, of Seattle, secretary; Charles A. Irvin, of Spokane, treasurer, and William F. Powell, of Ottawa; James Caruthers, of Montreal; Edward Bryan, of Coaticook, Quebec; Frank Carroll, of Quebec, and H. D. MacKinnon, of Great Falls, Mont., additional directors.

Cincinnati, Ohio, March 19.—An order has been made by the United States District Court, upon petition of Guy W. Mallon, receiver of the Superior Portland Cement Co., for the allowance of creditors' claims to the amount of \$65,423.53. Receiver Mallon has also filed his thirteenth monthly report, showing the business of the company for the month of February, for which receipts were \$13,295 and disbursements \$20,308.91. Cash on hand March 1 amounted to \$29,994.

One of the largest deposits of cement material in Texas is situated in Kent county, near Clairmont. It is claimed by experts who have examined the deposit that it is not only of vast extent but that it can be easily worked. The development of Western Texas and the wonderful increase in the uses to which concrete is being put throughout this region affords an opportunity, it is claimed, for the establishment of a cement plant to supply the home demand.

It has recently been announced that the central mill of the Giant Portland Cement Co., at Egypt, Pa., has resumed operations, giving employment to several hundred hands. The Reliance mill of the company will close down for a brief period in order to allow workmen to make necessary repairs.

Cement Work Awakening.

Kansas City, Mo., March 18.—The matter of the bankruptcy of the Altoona Portland Cement Co., petition for which was filed in February, Charles L. Hogan being appointed receiver, was to have been acted upon March 15; but action was postponed for 30 days. This was accepted as a favorable indication that bankruptcy may be avoided. The offices of the receiver have been moved from the Commerce building in Kansas City, Mo., to the Wahlenmaier building, Eighth and Minnesota avenue, Kansas City, Kan.

Representative Naylor, of the Iola Portland Cement Co., lectured and showed lantern slides on farm construction at the C. P. A. hall at Midland, Kan., March 4. The lecture was given under the auspices of Grand Township C. P. A. and Midland Grange. No admission was charged and the lecture was well attended by the farmers living in that vicinity.

The cement work in Kansas City and its immediate territory shows signs of awakening and there has been some lively hustling among the cement men, and bids have been made on a great deal of work that is soon to open here. However, as yet the companies will not say just what ones they have landed contracts for. The price of cement has increased 10 cents over that of last month and it is now selling for 70 cents.

ATLAS PLANTS RESUMING OPERATIONS.

One of the best bits of news which has come from the cement regions for some time is the announcement that plant No. 2 of the Atlas Portland Cement Co. resumed operations on the 15. The plant, which has been idle since the latter part of January, will give employment to between 400 and 500 men, and it is hoped that the starting of the plant means the beginning of a business boom for the entire valley.

An official statement issued by the Atlas Portland Cement Co., at Northampton, contains the information that the plant will start on the 15 or 16 of March. The various departments of the plant are now being overhauled by workmen.

Plant No. 4, with a capacity of about 11,000 barrels daily, has been working steadily. When mill No. 2 is put into operation the Atlas company will manufacture an average of 16,000 barrels daily, or one-half of its capacity. Plant No. 3, one of the largest single cement mills in the world, remains idle, but prospects for an early opening are very bright. The reason for operating the additional plant at this early season is that the company, which has the contract to supply all of the cement used in the construction of the Panama canal, is about to make spring shipments there. The Hannibal, Mo., and Hudson, N. Y., plants are also about to be placed on better working time. The former has been working half time while the latter was practically idle. The total capacities of the three plants is in the neighborhood of 60,000 barrels daily.

The Atlas company has recently purchased the Raymond Laubach farm of 59 acres and 59 perches, situated near the Howertown creamery, for a private consideration. The sale was consummated through the real estate office of Kocher and Laubach. It is said that the farm has a large deposit of cement producing rock upon it.

Boston, Mass., March 19.—From the way Maine, New Hampshire and Vermont dealers have laid in American Portland cement in the past month, Canadian low prices and the shorter haul have not apparently proved enormously attractive. Local business in cement is reported brisk and heavy enough to satisfy most office forces. In accordance with notices sent out 10 days ago the Edison Portland Cement Co. is going out of the market temporarily. The reason given is that the bottom dropped out of

prices and the proper thing to do was to get out of the maelstrom of competition for the present. The New England office, Albert C. Bruff, manager, 79 Milk street, will accordingly close April 1. Mr. Bruff said: "We are closing up April 1 in accordance with notice sent to the trade last week. Yes, the whole office force is released entirely. The let-down is temporary until the price market is better. It may be weeks or six months."

SAYS CEMENT DUTY WILL STRENGTHEN MERGER.

"The present rate of duty on cement, 26 cents per barrel of 350 pounds, practically prohibits the importation of any cement from outside points and an increase of 7½ per cent can only result in increasing the profits of the Canadian Cement Merger and lessening the revenue from this source," said James McDiarmid, head of J. McDiarmid Co., Ltd., general contractors, Winnipeg. "To accomplish the object the government has in view it is necessary to reduce the present rate of duty on this article from 10 to 12 cents per barrel of 350 pounds to insure competition of any kind from outside points. With an increased demand for cement in the United States this year and with the large interest a number of the American manufacturers have in the Canadian cement merger, there can be no serious competition should the present tariff be reduced as suggested and the citizens of Canada are under no obligations to pay dividends on stocks and bonds at least twice the actual value of the plants of this merger. While the government might reasonably expect some revenue from this source by a reduction of the existing rate of duty, it can only defeat its purpose by any increase whatever, and in view of all the circumstances connected with the Canadian cement merger there can be no patriotic principle involved by a little consideration for the consumer in this case."

NOVEL ENTERTAINMENT TO LEHIGH SALESMEN.

The meeting of the Eastern territory salesmen of the Lehigh Portland Cement Co., of Allentown, which was recently held in that city, terminated with a banquet held at the Elk's club and included an instructive session held in the afternoon at the same place. The lodge room on the third floor of the Elk's building had been turned over to the "boys" and for a week previous to the meeting men had been employed in laboring hard to give the salesmen the surprise of their lives on the occasion of the feast.

The entire room had been transformed to represent the exterior of the Fogelsville plant of the company. Around the room were hung canvasses showing the mill proper and the storehouses. At one end of the room was constructed a stage, on which was given a delightful tableau entitled "The Manufacture of a Lehigh Dealer."

The tables had been built especially for this event and were made in oval shapes, an exact reproduction of the new Lehigh label. In the center of the tables was painted the Lehigh label in red, white and blue. The tables and room were decorated with an abundance of flowers and palms.

At the entrance of the room was the paymaster's window. Each guest as he entered turned in his pay check, which was given him before ascending to the banquet chamber, and received in turn his menu card. The place cards with the diner's name thereon were made of cement. There were other cement novelties that graced the table. After the guests had partaken of the excellent menu they were given a real treat, when the curtain was thrown aside and the interior of the cement dealers' office was shown. The playlet was written by Fred Shilling, of the promotion department of the Lehigh Portland Cement Co. It was given with the idea

of illustrating to the salesmen how Mr. Fuchs, the advertising manager, would go about selling Lehigh cement if he was on the road.

CEMENT TRADE RESTRICTION IN BRITISH COLUMBIA.

Vice Consul Robert M. Newcomb, of Victoria, Canada, states on Feb. 18 that two large and successful cement plants are located on tidewater about 20 miles from Victoria. The older plant (Vancouver Portland Cement Co.) has been in operation for six years; its value is roundly placed at \$1,500,000; daily capacity, 3,500 barrels. The other mill (Associated Cement Co.), also placed at a value of about \$1,500,000, has 2,000 barrels daily capacity.

During 1911 and 1912, banner years for nearly all lines of industry here, the former company did a business of \$1,800,000, while the latter did \$1,000,000 business. The business depression, however, has affected nearly every line of industry in this district. Construction work, where cement is mostly used, has been greatly restricted, consequently the market for cement has dwindled to small proportions. The combined output of these plants, which amounted to about \$3,000,000 during 1912, shrunk to about \$390,000 for 1914. The Vancouver Island plants sell altogether to British Columbia coast cities and the condition of their business is a rather true barometer to general industrial conditions in British Columbia.

During 1911 and 1912 some accommodation shipments of cement were made to the United States and in turn such shipments are occasionally made to British Columbia, but on the whole there is little exchange of this commodity between the United States and British Columbia.

On account of the dullness of business and the lack of a market both mills have indefinitely closed. The owners state that they have on hand a supply of 100,000 barrels of cement. As the market at present will only absorb about 400 barrels per day, there is little likelihood that the mills will start up for some time to come. The average price per barrel is \$2.35. Prices for cement are firm and there is no indication that they will be lowered.

Ironton Plant Increasing Capacity.

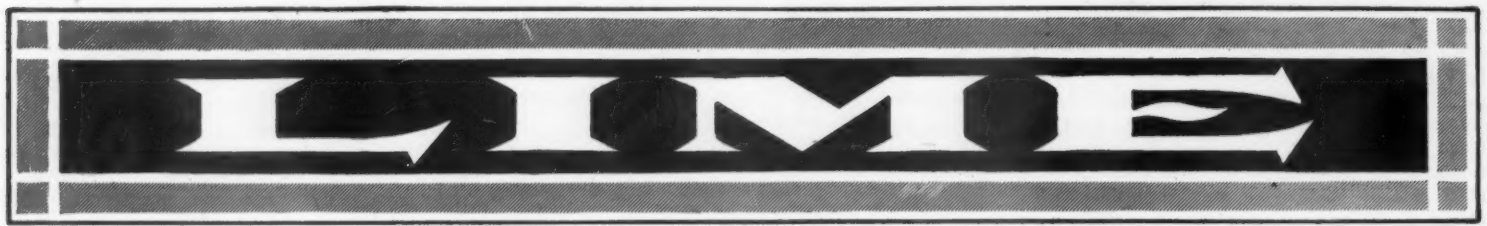
Two new kilns and the necessary grinding machinery are being added to the plant of the Ironton Portland Cement Co., at Ironton, Ohio.

This firm manufactures an exceptionally light-colored cement and it is due to the demands of the past season that these improvements are being made. According to A. C. Steece, general manager, little difficulty has been found in disposing of the 1,100-barrel capacity of the plant and officers of the concern feel justified in increasing the output to 1,800 barrels.

The Ironton Portland Cement Co., has been favored with nice orders from the U. S. government for dam work on the Ohio river. A contract has recently been secured for Dam No. 33, which will be constructed near Maysville, Ky., and the requirements of which will demand at least 60,000 barrels of cement. Other contracts secured from this source have called on the Ironton company to supply cement for Dam No. 29 at Ashland, Ky., which is about completed; Dam No. 35, near Richmond, which is about half completed and Dam No. 31 at Portsmouth, finished last year.

Philadelphia, March 17.—A general improvement is reported throughout the entire Lehigh valley cement district. Where there were only 60 kilns in operation six weeks ago there were on this date 160 mills in service and there are reports that more will be thrown in before the end of the month.

The Allentown Portland Cement company is said to have taken all the orders it can at the old price basis and quoted a higher figure in the New York market, making the mill price approximately 70 cents.



Our Business Relations with Foreign Countries*

By Hon. William C. Redfield, Secretary of Commerce.

This institution of yours and ours is one which lies very close to me for a good many reasons. The Bureau of Standards does the underlying work of our industries. It goes deep into the roots of things, as many an industry cannot afford to do for itself or does not know how to do for itself, and works out patiently, sometimes through years and without thought of profit, the big problems that many of us in our factories really hardly know exist at all. Its influence in doing this fundamental constructive work is very great and very quiet and very silent, like all the big forces of the world. It is only the little forces that make a noise. The brook babbles but the currents of the ocean are silent.

Superficial Things Receive Undue Attention.

I sometimes think that one of the great faults of our whole industrial criticism—yes, and a good deal else of our criticism—is that we think so much of the superficial things and so little of the real things. I am accustomed from my father's training—and my mother's—to think that the old book is the best philosophy of life and business that there is, and there is a phrase in it that has come to me as a business man again and again as containing the substance of great truth for the business world: "The unseen things are the eternal things"—the real things are the things we cannot see and too rarely talk about.

You and I stand on the shore of the ocean. We see a lot of tumult, we see whitecaps that are pretty or otherwise according to the conditions of our mind and the risk we are in; we see a lot of disturbance. Those things are not the ocean, they don't do any good, they sometimes get people into serious trouble. None of us, standing there, can see the gulf stream moving steadily and beneficially, without which our shores and the shores of Europe would be inhabitable. That philosophy, if such it be, is one which goes to the very root of our business and our public criticism. We, all of us—I sometimes wonder if we are getting into a certain state of hysteria—we, all of us, are so guided in our thought by the superficial things that we see that we forget too much the strong and real things that are not so easily seen, but which are, after all, the controlling factors in this country.

Most Business Men Are Honorable.

A business man said not so long ago that he was tired of being thought a kind of undetected criminal. He had the idea that somebody somewhere was laying for him, pretty certain that if they watched long enough they would get him. The big fact—the biggest fact about American business—is that it has all in the mass, in the infinitely larger proportion, been conducted by honorable men who led honorable lives. Everybody knows that the true standards of American business, taken in the large, have not been vulgar and low and cheap; that on the whole you and I have tried in our factories to give a square day's work for a square return. It is the fellows who have disturbed the surface of things that have made most of the trouble and the noise and the tumult on the top of the business sea. This has hidden the currents flowing steadily beneath and has taken altogether a disproportionate share of our attention and thought during the last few years, and made it doubly hard for those of us who are interested to have the great currents move steadily to see them because of the whitecaps and the froth that must have been the visible things.

I did not start in to say that in particular; I think it a good thing to say, but let us, you and I, try now for a few minutes very informally to look at the present situation in the United States and get away from the surface and go below into the more quiet and profound waters and see how they are running.

Yesterday I had a very unusual experience; my assistant secretary called me a pessimist. It is a name which has, I think, never before been applied to me, but he was right from his point of view. In factory life my partner used to say to me, "Tell me the things that are wrong, I'll find out the things that are right, they don't need care, it's the things which are wrong that need to be looked after." Tell me those. And from that training, yesterday I was talking with my associate on a matter of business that was pending in Congress affecting our department, and I said to him, "I don't think you can depend upon this matter at all, until it is done; nothing is certain until it is accomplished; you have got to proceed upon the basis that that which you wish to happen will not happen, until it has happened;" and you know, as good luck would have it, it happened yesterday afternoon and the laugh was on me because he said I had been filling him up with pessimism before luncheon only to congratulate him on his success at dinner, which was true.

An optimist in business is the kind of fellow who takes things calmly into account—all of them, not the superficial things alone but the unseen things—and when he finds that he can deal with them at their worst, he can afford to be comfortable about them as they grow better. If, in our factory, we could handle a business problem taking it at its very worst, I always felt reasonably comfortable and happy about

handling it if things were better; and it seems to me that the ideal attitude for American business men in our present emergency is to look at things frankly as they are, and if then we see that the problem is one we can manage, we need not be worried. I am afraid we have been more troubled because we have not seen deeply into it than we should have been.

The Impossible Has Happened.

In August last the thing happened which you would have said on the first day of July could not have happened at all; the whole great fabric of commerce the world over was smashed in a week. In July it looked as strong, as sound and as secure as could be. The international exchanges were going on steadily; the things which existed in the early part of July had gone on ever since you were born and nothing seemed able to overthrow that great fabric of international exchange and commerce to which you have been accustomed from your boyhood. Yes in the first week of August it all went to pieces at one flash; and it was gone wholly for a time, because this situation in which we have been differs from every other situation in which any other country ever was placed before. There has been no great, universal war since the modern industrial system was founded—since the steamship and the telegraph and the telephone and the wireless came into use—ever since modern international finance bound the nations together. The last great world-wide war ended with Waterloo; there has been, as you know, none since.

The Franco-Prussian War left the soil of Germany untouched. The Crimean War was in a corner of Europe. The war between Austria and Prussia lasted six weeks and concerned a portion only of the territory of one power. The Italian war disturbed not at all the current of the world's commerce; and the whole system of commerce, as we know it, has grown up since the last great world-wide conflict.

Present Conditions Entirely New.

So we are facing conditions entirely new, entirely unexpected, and it was the most natural thing in the world that, when the fabric on which you and I depended as a matter of course to carry on our business went to pieces, in a week, there should be very, very serious hesitation. My own thought is, gentlemen, that the record of the past seven months in American commerce is one of the brightest pages in our whole country's history, and that, when it shall be sufficiently distant to be treated wisely as a matter of history, we shall find in it that perhaps the brightest page in the history of American business in particular is that which will tell the story of how the business men and the bankers of the United States united in a sagacious and successful effort to carry their country through such a crisis as never a nation faced before.

You will recall the unpleasant days of 1907-1908. I remember them very well. I had to start a new business in October of 1907 and I remember extremely well what that winter meant but in 1907 and 1908 every great European center could, and, as a matter of fact, did come to the rescue of American finance when it was threatened. The current of the world's wealth flowed normally in the dark days of 1907; but when August of 1914 came, those currents did not flow at all and America has to face the world alone and take the shock of the breakdown all by herself.

It will be the best basis in the world for a hopeful outlook if we look back for just a few minutes at what took place in and since the month of August. Almost every source of financial strength and business credit upon which we had hitherto unconsciously relied, went in a week, and we found ourselves in the position of a debtor suddenly called upon to pay. We owed Europe two classes of debts. We owed her a fixed debt—a funded debt to the extent of about five thousand million dollars—and we owed her a floating debt, variously estimated at from two hundred to five hundred million. We were in a position where, all at once, we had to face the fact that the funded debt might be unloaded upon us to be sold at any price it would bring (and it was so attempted to be sold) and we were in a position where we might be and in fact were called upon the pay off that floating debt. We were not only called upon to do that or likely to be called upon to do that, but we were also, for the first time in the history of any great people, in a position where we had no resources except our own to depend upon and where every other element of strength was removed.

I don't overstate that. If you will grasp the fact that this collapse of the international ebb and flow of wealth to the point where it was needed came at a time when we stood as debtors to the world, you will get, I think, an idea of what has happened when you also consider today that we are secure from all these alarms.

Floating Debt to Europe Paid in Goods.

The day has gone by not to return. The floating debt has been paid; it has been paid in goods and not in gold. The gentlemen who came to this country to negotiate its payment in gold returned at the end of about six weeks or so, satisfied that the debt was being paid, but not in gold—paid in goods. You will remember that a large fund of gold was suddenly raised and was made available for use and was in part used, but you will also remember that it never proved necessary to use it all. The current of ex-

changes, of international trade, which had been against us for a few months, and which, in August, was heavily against us, changed with the month of September and became favorable that month to the extent of about \$17,000,000; increased in October till, in that month we sold \$56,000,000 more than we bought abroad; in November we sold \$79,000,000 more than we bought; in December we sold \$131,000,000 more than we bought, and in the month of January, I think the records will show, when complete, that we have sold \$150,000,000 more than we bought, so that in the two months, that is, in the eight or nine weeks alone comprised within the two months of December and January, we have sold abroad goods creating a favorable balance to the extent of \$280,000,000. As against that we are not now expending at the usual annual rate of from two to three hundred million dollars abroad in the shape of travelers' expense. Already the sober minded men of the financial papers are talking about something wholly unprecedented, namely the creation in this single year of a foreign favorable trade balance which may run up, and they say it will run up, in excess of a billion dollars, over a thousand million dollars.

It is proper to put it in a little more picturesque way and to say that we are accumulating credits with Europe now at the average rate of \$6,000,000 a day. That is an actual fact since the first of December. By the time tonight comes and you sit down to a comfortable dinner, Europe will owe us \$6,000,000 more than she did when you took your breakfast; and by the same time tomorrow night she will owe us another \$6,000,000; that's what happens.

Now, why is that so and upon what may we reckon as to its permanency? These facts exist because, now that the air is cleared and we can actually see—not the froth and foam of the surface but the great currents themselves—we find that they must be so. If we had been undisturbed in mind from the beginning, we should have been able to see that they must be so because this is the only great industrial and agricultural and mineral producing nation in the world that is not involved in war, and is certain not to be. Where else would any of you go, if you had to place an order for goods which required four months in their manufacture, to get that order filled without some doubt as to its being disturbed by war. Where would you go?

Competitors Out of the Market.

One of our great competitors is entirely out of the market. A second and smaller one, though still an active one—Belgium—is also out of the market. The iron and steel and textile districts of France are the very seat of war. They are, so far as they go, out of the market and the industries of Great Britain are pressed to the utmost to meet the demands for sustaining in the field an army greater than she ever had before. Those are our great competitors.

There remains but one other great industrial and commercial nation—Italy—and though not ranking with the others in size, she is still a very respectable figure in the world's commerce. Italy, however, has the fire burning along two of her frontiers and has herself mobilized a million men. So that it is true, and it is the first time in the world that it ever was true, that if you were business men in Ceylon or China or Argentina or Australia, there is but one place in the world to which you could go and place an order that takes four to six months for its filling, with reasonable certainty that it would not be disturbed by the possibilities of war.

Nations Looking to Us for Credit

That is why the nations turn to us. There are other reasons. One is that the whole world has depended upon Europe for its supplies of cash, and those supplies of cash are suddenly cut off. Great Britain has announced that there must be no loans made save with her official consent outside of her own empire. Where is South America, for example to be financed? Not where she was financed before, for that source is gone. Where are Greece, and Roumania and Italy and other nations to get the supplies of credit that they have hitherto required? Not where they have gotten them before, for those supplies are gone; that valve is closed. So they are coming to us now for supplies of credit, as well as for supplies of goods, and, hence, though the transactions are as yet, reckoned on an international scale, but relatively small, still there have been some interesting experiences.

We have made, for example, a loan of \$15,000,000 to Argentina, taken up, by the way, in four hours. We have a loan to France, we have a loan to Russia, to Sweden, to Norway, to Panama, to Canada; and others are under negotiation. Not large loans, taking sometimes the form of credits established in this country rather than that of actual loans; but for the first time since you came to business consciousness, the whole world turns to the United States not only for goods but for credit—and yet seven months ago we stood in a position where we were trembling lest the world demand of us to pay suddenly our debts.

It is one of the most astonishing revolutions of attitude that has ever occurred, so entirely reversing the position of our country that I am not at all surprised that many more men have not grasped the fact that we occupy to the world at large the reverse attitude from that which we occupied when the war broke out, and an attitude such as never was held before by this country of ours.

War Supplies Small Factor in Increased Business.

Nor is the demand of the world of commerce one which comes chiefly from the demand for war supplies. Those orders are welcome and I do say that they came from every combatant—it is only a partial and exaggerated statement which would lead one to

*Address delivered before members of National Lime Manufacturers' Association at Washington on February 4, in which good tonic is given for present condition of affairs.

suppose that they were confined to any particular group or nation. They came from all the combatants, to this country, but they are not the great factor; and I doubt if they form anything approaching even a very large proportion of the great business which I have so roughly sketched to you.

The best business which is offered to America, and the business which has in it the element of permanency which we all desire is the business of the neutral peoples coming to us because there is no other place to go. None of you before ever dreamed of such a thing as Roumania keeping a buying agency in this country, but she has one now with headquarters at the Hotel Astor, New York. So have other peoples established buying commissions in America. From all around the globe, from the neutral peoples chiefly, comes to us a demand for goods which has overwhelmed, to put it in the most moderate way, all the shipping facilities that exist. I have been within the last week on the wharves at Galveston and New Orleans, and they are filled with merchandise—I don't refer to cotton. They are filled with cotton, too—and wheat—entirely beyond the capacity of the vessels there available to handle them and with no reasonable prospect of moving for some weeks to come.

In our little daily paper, "Commerce Reports," we publish every morning what we call "Business Opportunities." We print ordinarily 10 to 20 a day. We have now strictly excluded from the publication everything which has to do with war purchases, and yet we had to issue an extra edition the other day of 130 of these opportunities, of about 13 times the normal number, in a single day.

Can We Supply World with Credit?

Looking at the present situation, gentlemen, from a business standpoint, coolly and quietly and ignoring the white-caps and the froth, the fact is that we are now the center to which the world turns for credit; so much so that I should not be surprised—I am not a prophet nor the son of one—to see some great European power or powers suggest the issue of government bonds of its own payable in American dollars. That, in the nature of present things, cannot be otherwise, and is quite outside of the question whether we have got the credit to supply.

That is the problem. The world is turning to us for it. Whether we have it I very seriously question. Secondly, we are the place to which the world is turning for goods. They are turning for both of these things because they must, not necessarily because they would; and meanwhile our competitors in the world are busy destroying themselves.

I met a gentleman the other day who said he thought that after the war was over the old competition would be on in a month. Well, the war is not over, and orders for motor vehicles placed in Detroit, for delivery in August by some of the great powers do not seem to show that they expect it to be over speedily. But stop a moment and think, if you please, just what is happening yonder and its reflection upon you and me as American business men. In the first place, our competitors are at work destroying their good-will and they have made excellent progress in that direction to such an extent that we have had official messages from the men at the head of affairs in nations both in South America and in Europe inviting us to come and take the place that the warring powers have laid aside. We have a man in one of the European countries now as a result of such an invitation from the head of the government. Our friends yonder, through the fatal folly of war, are destroying one of their most valuable assets, their good will. They are destroying their physical equipment. A large manufacturer, a man accustomed to look beneath the surface of things, told me the other day on his way to South America that he had by careful study of the situation in northern Europe determined that his competitors there would take four years to get back

(Continued on page 49.)

The German Potash Embargo.

With the complete embargo which Germany has put against exports of potash, the rising hopes of American consumers have been blasted and it has sent prices up to former prohibitive levels of from three to four times normal quotations, says The Lime Service Bureau, of Washington. It looked a while back as if America was going to get a fair stock of potash, but now the foreign potash embargo is complete.

The United States consumes 3,500 tons of potash salts per day. Up to January 1 the shortage in this country, due to the war, was over 375,000 tons, and it is estimated that by May 1 the shortage will have increased to about 725,000 tons. The potash embargo will work a severe hardship on our fertilizer companies, who have to move on a prearranged plan of manufacture. A number of companies announced months ago, shortly after the war started, that their spring fertilizers would contain on the average of 50 per cent of normal potash content. Now, this sudden embargo on potash has made these 50 per cent potash fertilizers appear very attractive.

Reasons for Germany's imposition of the potash embargo may be based on several conditions. One theory is that Germany probably does not care to furnish an important plant food to raise grain crops in the United States to feed her enemies. This shows, from a German standpoint, one of the most reliable from an agricultural point of view, what a valuable plant food potash is.

From reports received from fertilizer dealers, potash fertilizers have been advanced in price 10

per cent; for example, potash fertilizer that cost \$20 a ton before the war started now costs \$22, with the 50 per cent lesser amount of potash, and there is a possibility of still further reduction of the potash element in the fertilizers containing this important constituent of plant food.

Our leading agricultural scientists advise the use of lime as a means through which the insoluble potash in the soil can be made soluble and available as plant food. Almost all soils contain potash and most all have enough for present plant requirements, while some contain an excess beyond these requirements. If this valuable store of potash can be liberated and made available by the application of lime, the average farmer can readily make up the balance of potash needed to insure a good growth of the better paying crops, which are the grains. The lime should be applied to the soil evenly, with a lime spreader if possible, and let the harrow follow shortly after. If the soil should be sour—and a good many are, more or less, from the overuse of vegetable and animal matter—the lime will, in addition, neutralize the acidity resulting in a more healthy growth of the plant.

Cincinnati, Ohio, March 19.—The H. H. Moores Co., of Springfield, O., one of the largest limestone quarries and lime manufacturers of Central Ohio, has been made the defendant in involuntary bankruptcy proceedings instituted in the United States district court here by R. B. Gordin, the Miami Powder Co., and others. It is alleged that the company is insolvent and that it has preferred other creditors, thus committing an act of bankruptcy. Schedules have not yet been filed.

Edward Simpson, president of the Medina Lime Co., Medina, N. Y., advises that he is using a Bradley three-roll mill for the pulverizing of limestone for agricultural purposes and is now contemplating building a \$30,000 addition to this plant to manufacture hydrated lime, and hopes to produce 50 tons per day of this material in the near future.

The Duck Run Lime Co., located near Ellwood City, Pa., is arranging to build a vast storeroom in New Castle, Pa., in order to furnish a market to supply farmers in that district with agricultural lime. The company is making a good run at its Ellwood plant.

A. & C. Stone & Lime Company

75,000 Tons MONTHLY

Macadam Crushed Stone

**For road building and
concrete work**

QUARRIES AT

Ridgeville and Greencastle, Ind.

We are not contractors

**General Office: 17 N. Penn Street
INDIANAPOLIS, IND.**

With the QUARRIES

Road Stone Prospects Good.

Pittsburgh, Pa., March 19.—Limestone men are feeling good over the large amount of road work to be laid this spring. Prices are likely to be a little better than last year. Concerns which make a specialty of bridge stone, ballast and other railroad stocks, however, are reporting conditions bad and say that very little business is in sight at present. Nearly all the quarries are shut down and are preparing to resume operations about April 10 or 15.

The Consolidated Stone & Mining Co., with offices in the Farmers' Bank building, has part of its quarry at Ellwood City, Pa., working. The officials say that it is a little too early to prophesy much as to this year's business.

The Craig Stone Co., with offices in the Oliver building, reports no road contracts let so far and very little railroad working coming forward. Prices are going to be about the same as last year, except that the 5 per cent increase in freight which the railroads east and west of Pittsburgh have secured will be marked up on this year's dealings. This increase will amount to from five to eight cents per perch of stone for shipment in the Pittsburgh district.

G. W. Johnston Limestone Co., of New Castle, Pa., has let the contract to the Allis-Chalmers Manufacturing Co., of Milwaukee, Wis., for a \$25,000 addition to its plant at Hillsville, Pa. This will have a capacity of 10 tons of pulverized limestone per hour and will be the most up-to-date plant in western Pennsylvania, it is claimed.

Frank Mowen, of Chambersburg, Pa., has bought the Minoek tract south of that place and is arranging to put in a big mining and crushing outfit to develop the limestone deposits.

THE NEWS IN BRIEF.

Work has been started repairing the equipment at the Fanwood Stone Crushing Co., Fanwood, N. J., in preparation for the spring activities. A new crusher has arrived and will be put in position as soon as the weather permits.

The General Crushed Stone Co., at Glen Mills, Pa., is making extensive improvements to its plant, with a view of having better power facilities, and a number of West Chester workmen are employed on the operations.

R. B. Hayes, contractor, Lexington, Ky., is to erect a large concrete and crushed stone plant.

The Business Men's Club, Paris, Tenn., L. S. Daniel, secretary, contemplates developing a limestone quarry; capital secured, manager not selected; to choose manager with capital to invest, then to purchase machinery and erect building.

Joliet Pioneer Stone Co., Joliet, Ill., has reduced its capital from \$225,000 to \$22,500.

The Carbon Limestone Co., Youngstown, Ohio, has awarded contract to the Allis-Chalmers Co., Milwaukee, Wis., for the installation of equipment in plant being erected at Hillsdale, Pa., costing \$40,000 and having capacity of 100,000 tons of limestone per year.

The Ozark Stone Products Co., Ozark, Mich., has purchased 100-acre site and will erect limestone quarry.

The Hooper Limestone Co., J. C. Sproat, manager, Chattanooga, Tenn., will enlarge and erect additions to the crushing plant.

Lobdell Bros., Elizabethtown, N. Y., are opening up a limestone quarry.

The Pacific Rock & Gravel Co., W. L. Hodges, president, Pacific Electric building, Los Angeles, Cal., will erect a new rock crusher to be operated by electric power.

The American Lime, Phosphate & Fertilizer Co., J. H. Dean, manager, Centreville, Tenn., proposes installing a stone crushing plant at Bon Aqua, Tenn., for grinding limestone.

Breen Stone Co. has been reorganized with R. D. Fawcett, 504 Ryan building, St. Paul, Minn., as manager. Plant is at Kasota, Minn., and will be enlarged.

The Standard Slag Crusher Co. is planning to construct a crushing plant at the Marting Iron & Steel Co.'s plant at Ironton, O., to be electrically operated. The product of the crusher will be shipped all over Southern Ohio.

RECENT INCORPORATIONS.

Ohio Quarries Co., Cleveland, Ohio, \$1,000,000; W. A. C. Smith, R. Walsh, George B. Siddall. Have changed their name to the Buckeye Quarries Co., Cleveland.

The Limestone Crusher Co., Ewing, Ky., capital \$1,000; incorporators: Jacob Stickrod, I. N. Roses, F. B. Moore and C. F. Parker.

Union Stone Co., Vincent, Washington county, Ohio; \$10,000 capital; H. H., T. F. and H. N. Hayes, F. Howard, C. C. Middleswart, of Vincent.

Savage Clay Products Co.; capital, \$1,000,000; mining and quarrying for clay, rock, etc.; H. E. Latter, Wilmington, Dela.

Scottsboro Limestone Co., Scottsboro, Ala.; capital, \$3,000; crush lime for agricultural purposes, road building and concrete work; J. C. Jacobs, president; Virgil Bouldin, vice-president; J. W. Woodall, secretary.

The Crushed Stone Co., care T. Richard, Star Italy hotel, Montreal, Que., Can.; capital, \$20,000.

Farmers' Ground Limestone Co., Indianapolis, Ind., capital, \$25,000; incorporators: William H. Dye, A. L. Dye and J. H. Miller, all of Indianapolis.

New Jersey Pulverizing Co., Cedarville, N. J.; capital, \$100,000; to pulverize sand; incorporators: Henry S. Garrison, Cedarville, N. J.; Ervin B. Fisher, Lewiston, Pa., and Adolph Hersch, New York City.

Fargo Stone & Sand Co., Fargo, N. D.; capital, \$75,000; Jos. Ames and others.

Temple Slag Co., 327 Walnut street, Philadelphia, Pa.; to do a general quarrying business; I. L. Detwiler and others.

Stebbins Mining Co., Rockford, Ill.; capital, \$50,000; Dearell D. Shierk and others; mining and quarrying.

STONE CRUSHING PLANT CHANGES HANDS.

The big Kelley Island stone crushing plant west of Akron, N. Y., has been bought by the General Crushed Stone Co. The latter already owns a stone crushing plant in Akron, and also a half dozen other plants, with general headquarters at South Bethlehem, Pa. The General will continue the Kelley plant. It is said that big orders for the product is the cause for its purchase. Work will be resumed this month at these plants.

Much Work for Quarries.

Kansas City, Mo., March 19.—The long-delayed sunshine emerged around Kansas City March 13 and business began to pick up. There were more contracts "in the air" at one time than for more than a year—some pretty substantial buildings, river work, paving, and miscellaneous. The bright weather caused a beginning to be made on a great deal of repair and paving for which contracts had been let previously, but which had been held up during the winter. Rock crusher men were looking forward to a period of being swamped with orders. The downtown district is torn up with the repair of streets and repaving and with sewer work. One of the biggest jobs from the rock man's standpoint that has been hinted at is the possible rebuilding of the Chicago, Burlington & Quincy bridge, that old timer of a railroad and wagon bridge that in the early days was the only means of communication, except the ferry with Harlem, across the Missouri from Kansas City. Now there is a magnificent steel street railway and wagon bridge built by the "A. S. B." interests, so-called, which steers traffic far southward of the old line of travel fostered by the Burlington bridge. Harlem has been washed away; it's a sandpile now, and it is guessed that the new bridge, if one is built, will be equal to the present big North Kansas City structure, and it will take a lot of rock for concrete piers and approaches, the bridge level necessarily being much higher than the ground level on the north bank.

Wisconsin Crushed Stone.

Milwaukee, Wis., March 19.—The Badger Crushed Stone Co., of Milwaukee, has been incorporated with a capital stock of \$35,000 by M. A. McCabe, J. D. Cantwell and F. I. Weiland.

The Allis-Chalmers Manufacturing Co., of Milwaukee, has been awarded a contract by the Carbon Limestone Co., of Youngstown, O., for installation at its quarries at Hillsville, Pa., of grinding machinery for the manufacture of pulverized limestone for fertilizer uses. The new plant will cost about \$40,000 and will have a capacity of 100,000 tons of limestone per year.

The Wisconsin Granite Co., of Red Granite, Wis., has received two more carloads of machinery for installation in its crusher plant. The company recently installed an electric hoist.

The Tomahawk Crushed Rock & Gravel Co., recently incorporated at Tomahawk, Wis., has elected the following officers: President, Herman G. Foster; vice-president, C. H. Grundy; secretary and treasurer, Elmer D. Foster. Most of the new equipment for the company's gravel pit has arrived and is now being installed. Four bins, holding approximately 30 tons, with an elevator and a rock crusher, comprise most of the equipment.

The Green Stone & Quarrying Co., of Sturgeon Bay, Wis., has purchased 40 acres of land adjoining its property.

Darragh-Downey Mining Co., care W. H. Graham, Hope Chambers, Ottawa, Ont.; capital, \$100,000; general quarrying.

The James Gow Lime Kiln Co., Ltd., village of Fergus, Ontario, Canada; capital, \$60,000; quarry and crush stone of any description; incorporators: Frank Campbell, Morris Roy Edgar, Frank Brown, Blanche Legree and Marie Powers, all of Toronto.

Important Change in Drill Manufacturers.

An important change in the big blast hole drill business was made the first week in March when The Cyclone Drill Co., with factory and head office at Orrville, Ohio, was taken over by the Sanderson-Cyclone Drill Co. The new concern will continue the manufacturing plant at Orrville, the change involving simply a change in management. The officers of the new company are:

R. R. Sanderson, president and general manager. Will Ford, vice-president.

Paul Hildebrandt, secretary and treasurer.

Associated with these three men are: C. H. McCarthy, New York City; W. T. Kershner, Orrville, Ohio; J. F. Munn, Chicago, Ill.

Every member of the new organization is a practical manufacturing and well drill man.

Mr. Sanderson, who heads the organization, ranks as one of the foremost experts in the big blast hole field, and has probably had as much to do with the adoption of the big hole method of blasting as any other man in the country. The book "Drill Work, Methods and Cost," written by Mr. Sanderson, stands as an authority on cable and hollow rod drilling, and the paper "A Cost and Time Study of Big Hole Drilling," presented by him before the National Lime Manufacturers' Association a few years ago, ranks as the most complete exposition of the principles involved in the application of the big hole method of drilling and shooting in connection with rock excavation.

The Cyclone No. 14 big blast hole drill which The Cyclone Drill Co. has had on the market for the past six years, more than 500 of which are in operation in the different quarries throughout the United States and foreign countries, was designed by Mr. Sanderson, who embodied in this machine those features of construction which his experience under actual drilling conditions taught him to be essential for the handling of rock drilling in quarry work.

Mr. Hildebrandt, who for several years was assistant factory manager in the Flint, Mich., plant of the Buick Automobile Co., will have charge of manufacturing operations for the new company.

Mr. McCarthy will have charge of the New York office, which office will handle all Eastern territory and all foreign business. Mr. McCarthy is an old hand, not only in the big blast hole game, but also in other quarrying operations, and for the past few years has had wide experience in stone work, having had charge of the large plant of the Toledo Glass Sand Co., of Toledo, Ohio, and later of one of important trap rock quarries in the East.

Mr. Munn for the past seven or eight years has had charge of the Chicago office of The Cyclone Drill Co., and will continue in that position with the new concern. During the time Mr. Munn has been in charge at Chicago, he has seen the change made in the Chicago district from the old method of tripod drilling and bench shooting to the modern method of big hole drilling and shooting. There is undoubtedly more credit due to Mr. Munn than to any other individual for the introduction of the big hole method in the territory which he covers.

Mr. Kershner for the past several years has been connected with the old company as general traveling representative and will continue in that capacity with the new company.

B. G. Cope, president, and W. H. Tschantz, treasurer of the old concern, who are retiring from the drilling machine field, were the original founders of The Cyclone Drill Co. and have been in charge of its destinies from the beginning, some 20 years ago. Under their management the plant has grown from a small, poorly equipped two-man shop to the present modernly equipped factory, employing over 100 skilled workmen.

The new company anticipates making quite a few additions both to buildings and in equipment, and arrangements are now being made for the erection

of additional machine and forge shops to take care of the greatly increasing volume of business of both drilling tools and machines, the completion of which shops will mean an almost doubled capacity.

Elevating Materials.

The automatic and semi-automatic skip hoist system should very strongly appeal to all who are familiar with the usual methods adopted for handling materials. Its main point is that of having an exceedingly low cost of maintenance and at the same time being either entire or semi-automatic in its operation. The field for its application is very large, it being a satisfactory method for elevating the product of mines, quarries and rock crushing plants. Its greatest use at the present time is in handling coal, coke and ashes, in steel mills, coke plants and steam power plants. An extra value must be attached to its use when handling granular, gritty materials, as all of the moving parts are entirely removed from contact with the materials handled. The hoisting cables are the only items usually requiring to be renewed and these are low in price, besides requiring very little time for replacing.

There are three general types of skip hoist construction, operated as follows: Two skip buckets in balance; one skip bucket with counterweight, and one skip bucket without counterweight. Any one of these allows for the application of entire automatic or semi-automatic control, depending on the capacity, material and general conditions surrounding the proposition. The principal parts are the skip buckets and the electric hoisting engine, together with the essential mechanical and electrical control system.

An entirely automatic skip hoist first requires that there be a storage hopper from which the material is delivered to the skips. This type is most frequently used where the material is not of too large dimensions and also where it is required to hoist a regular quantity to a given height. It is entirely dependent on the material itself for making the automatic system possible. If enough material is contained in the storage hopper to fill the skip bucket, it automatically starts and continues operating until there is not enough material left in the hopper to fill the skip bucket, in which case it automatically stops.

The receiving hopper is usually made of steel and when using two skips in balance requires to be double, each half being fitted with a chute provided with a gate and arranged to deliver into the skip buckets, and are so arranged that they will automatically be closed except when the skip bucket is in position to receive material.

The skip buckets are made of steel with heavy forged steel bale and proper connections for attaching hoisting cable, which in turn passes over sheave wheels to the hoisting engine.

The hoisting engine consists of a cast-iron winding drum directly connected to motor by means of cut steel gears, all being mounted on a heavy bed plate constructed of structural steel members all thoroughly braced. A multiple contact limit switch is direct geared to the shaft of hoisting engine drum. A solenoid brake is also mounted on the extended armature shaft of hoisting engine motor. This solenoid brake is so arranged as to be applied the instant current is cut off from the motor and is of ample capacity to hold the skips, either loaded or empty and in any position, upon failure of electric current.

The mechanical control system consists of a set of counterweighted levers in the skip hoist pit, placed in such a manner that the skip bucket rests on the short end of the arm and the weight of the empty skip is insufficient to raise the counterweight.

An electrical control system is provided, consisting of limit switch attached to hoisting engine, solenoid brake and a series of mechanical switches for the introduction of electrical resistance at suit-

able points in the travel of the skip buckets so as to produce satisfactory slow-down and starting effect and preventing an extra heavy current rushing in on the line and through the motor at the time the current is turned on. This control system is primarily automatic in its operation, but is also provided with a push button control so as to insure the starting up of the hoisting engine under any conditions. The equipment is manufactured by The C. O. Bartlett & Snow Co., of Cleveland, Ohio.

STONE BUSINESS IS BOOMING.

"Great activity is being shown in the quarry business all over the state," said M. P. Goetschus, manager of the National quarries, in Lima, Ohio, a few days ago. "This should be the best year ever encountered in the stone business, because of the great amount of work that was put off last year, owing to the financial conditions. The country-wide movement for good roads is another faction that will have a great influence on this work. This movement, which has been increasing in force for a number of years, reached its zenith when the building of the Lincoln highway across the United States, from New York to San Francisco, became a reality instead of a myth.

"Though this movement was more pronounced last summer and fall than ever before, it was impossible to do much actual work in this line, because the money market was in such stringent conditions, that the bonds could not be absorbed by the banks to create the necessary funds.

"The farmer has now joined the business man in the city in this movement. The farmer was at first opposed to this improvement of roads, especially shortly after the automobile came out, as he then considered the motor car as a menace to safety and a destroyer of roads. However, this condition has ceased to exist altogether, mostly from personal experience, as a large majority of farmers are now owners of machines."

FINE CRUSHING.

The pulverizing of limestone for agricultural purposes is coming into favor very rapidly and to meet the demand for mills for this purpose the Bradley Pulverizer Co., Boston, Mass., is manufacturing a mill which will pulverize to the necessary fineness, with a large output and low maintenance cost. The Medina Lime Co., Medina, N. Y., says of the Bradley three-roll mill: "It has done fully what was claimed for it." In this particular instance the mill in question did more than was claimed for it as the Bradley company guaranteed an output of five tons per hour to a product which would run 90 per cent through a 60-mesh sieve, and the Medina people are obtaining an output much more than this to a fineness of 61 per cent passing a 200-mesh sieve, 90 per cent passing a 100-mesh and all of the material passing a 25-mesh sieve. This pulverizer requires less than 50 horsepower to operate. A mill of this character can be obtained at a reasonable price. It has an output of from five to eight tons per hour, taking material three-fourths inch and under in size and reducing it to the necessary fineness without the use of auxiliary screens.

George H. Cope and The Corrigan-McGee Rock Crusher Co., of Kansas City, have consolidated their crusher resources, and the business of all is being conducted from the offices of the Corrigan-McGee firm in the Reserve Bank building. The latter firm also has a large insurance business, and to care for the double interests took a handsome suite. Mr. Cope's crusher is at Independence, Mo., on the Missouri Pacific railroad; the other company has crushers at Selsa, Mo., on the Chicago & Alton, and at Twenty-seventh and Manchester, Kansas City, on the Kansas City Southern railroad. The combination gives access to these several roads, which is, of course, a very marked advantage.

SAND and GRAVEL

The News in Brief.

Superior Sand and Gravel Co., 726 Dime Bank building, Detroit, Mich.; has increased its capital from \$200,000 to \$500,000.

Deckers Stone & Sand Co., Morgantown, W. Va., will begin the erection of some new buildings at its plant at Sturgis as soon as the weather permits.

Rapids Gravel Co., George K. Force, manager, Alexandria, La., has leased a large gravel deposit near Woodworth, La., and will install equipment for mining gravel.

Evansville Sand & Gravel Co., Evansville, Ind., has increased its capital to \$25,000.

Boonville Sand Co., Boonville, N. Y., has increased its capital from \$5,000 to \$20,000.

The Tidicut Sand Co., Tidicut, Pa., will commence work in the near future on the installation of new machinery.

Glenwood Sand & Gravel Co., 268 W. 34th street, New York City, has decreased its capital from \$75,000 to \$5,000.

Juniata Sand Co., Sunbury, Pa., has sold its holdings to Covert & Carson, of Williamsport, Pa.

The Covington Sand & Gravel Co., Covington, Ky., has increased its capital to \$40,000.

Arundel Sand & Gravel Co., Pier 2, Pratt street, Baltimore, Md., has had plans prepared for the erection of sand and gravel bin and plant costing \$5,000.

The Lincoln Sand & Gravel Co., Lincoln, Ill., will increase the capacity of its plant by installing new equipment the ensuing year.

J. M. Bragassa and Fred R. Ratcliff, of the Hudson Stone Co., Tulsa, Okla., are planning to open up a sand and gravel pit at Arkansas City, Kansas.

The Washed Clean Sand & Gravel Co., Chelsea, Mich., will erect a plant and install equipment.

Greenville Gravel Co., Harry B. Hoal, Greenville, Ohio, has purchased a large tract of land and will establish a gravel plant.

Panhandle Gravel Co., Anderson, Ind., has increased its capital to \$5,000.

The Union Sand and Material Co., St. Louis, Mo., recently bought four acres at Wabash tracks and Maple avenue, St. Louis county for \$50,000 and a deed was recorded at Clayton. Mr. and Mrs. William Bagnell transferred the property. The company has had a lease on the ground for several years for a branch business.

Improvements are being made by the Crystal Lake Crushed Stone Co., operated by Sheboygan men at Crystal Lake, Wis. A system for washing the gravel has been put in. To carry this out the company has sunk a well 64½ feet deep and 10 inches in width. The water from this well will be used to wash the gravel.

The Rosenberg Gravel Co., Rosenberg, Tex., operating extensive gravel pits on the Brazos River at that point, commenced operations a few days ago. Additional modern machinery has just been installed. This plant was recently moved from a site several miles below town on the river front. The management reports a number of large orders on hand.

DRIFTWOOD INTERFERES WITH SAND OPERATIONS.

A source of supply for a number of Kansas City sand firms is the Kaw river, which has an annual influx of snow, ice and driftwood. The debris began to gather last month and workmen of the sand plants are now busy clearing the river of these obstacles. Until this is done, it is impossible to commence spring operations.

Companies operating on the Kaw river are: Stewart-Peck Sand Co., Kaw River Sand and Material Co. and the Kansas City Sand and Gravel Co., all of which have extensive interests in the Kaw river sand district.

Repairing Diggers During Dull Times.

Pittsburgh, Pa., March 19.—This is still an off-season for the sand companies and few Pittsburgh concerns are doing much but waiting. Boats and diggers are being put in repair so that when the rush of business comes there may be no delay in taking care of it. There has been little high water this spring, which has worked very much to the benefit of the sand companies, which usually lose some equipment on account of the winter and spring floods.

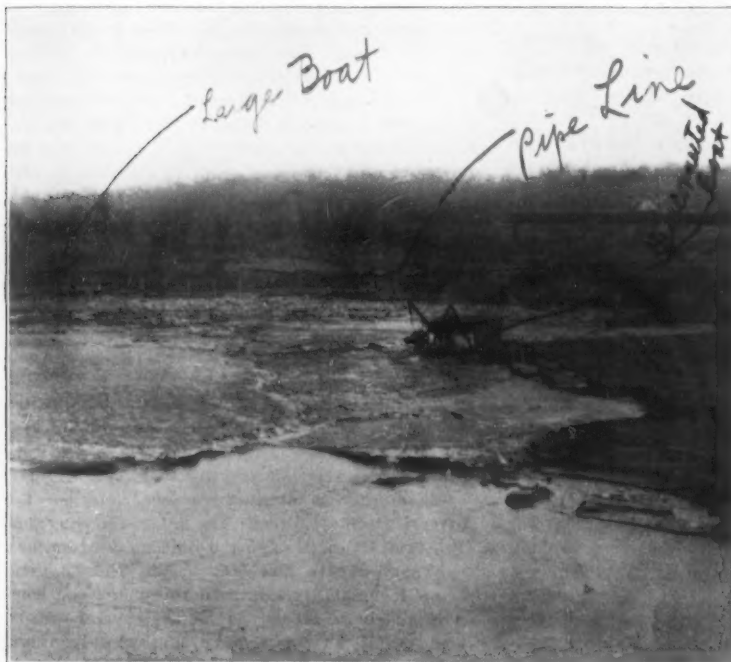
The Parkersburg, Marietta Sand Co., of Parkersburg, W. Va., is building at considerable expense extensive improvements to its South Side plant. This will largely increase the output of the company.

The Burlington Sand & Gravel Co., recently incorporated at Burlington, Wis., with a capital stock of \$25,000, is rushing the work of erecting its new plant. The office building has been completed and is now being occupied. Sidetracks to the plant have been constructed. George Koier, of Chicago, is the active head of the company, and will be manager.

EVANSVILLE COMPANY GETTING ACTIVE.

Evansville, Ind., March 18.—The Evansville Sand & Gravel Co. will send one of their outfits up the Ohio river, during the coming week, where they have secured contracts for gravel and sand at Cannelton, Tell City, Rockport, Troy and Grandview.

With the large amount of street paving which will be let shortly by the city of Evansville, it seems as if the sand and gravel companies will have all they can do for the season. Reichert & Stinchfield have begun grading on the Howell road, which is one of the largest contracts that has been let in this city for brick paving for a number of years. Recent road contracts have been let to Traylor & Krempf, at Jasper, and J. N. Kinman, at Petersburg.



EACH SPRING SEASON SEES A BLOCKADE OF ICE AND DRIFTWOOD ON THE KAW RIVER, FROM WHICH A LARGE PORTION OF KANSAS CITY SAND REQUIREMENTS ARE SECURED.

SAND-LIME BRICK

The Manufacture of Sand-Lime Brick

BY G. SYLVESTER, CALGARY, CANADA.

Brick making dates back many centuries. Those of us who have or possess a copy of the book of books, the Bible, will find in Genesis that brick making was a known art in those early days. The children of Israel in 1706 B. C. made brick and they were found exceptionally good. Not only were they found good brick, but they were found good building material, for the Tower of Babel was built of them. So from those early days up to the present period brick has been the one staple building material. Bricks have been made in a large variety of sizes, from three inches thick by one foot square, and over, and they were also made like "Joseph's coat," of many colors, and are to the present day.

In those early days they used straw as a binder of material, the same as our plasterers use hair today in their lime mortar for the ordinary plastering work. In the early ages "time" was not of the same importance as it is today, for we are living in a considerably faster period, as time is money and those interested in the great industry of brick making experimented with material as well as machinery.

In burnt brick it was found that no kilns could be uniform in size, hardness or color. This was overcome first by Dr. Michaelis, of Germany, who experimented and in the year 1880 discovered the greatest of all inventions in the making of brick, the union of sand and lime and the hardening of them by steam. This process has grown in almost every country in the world. Improved since those early days of discovery, machinery has been made so as to save a great deal of time and cost and increase efficiency, until today sand-lime brick claims many advantages over any other building brick or other substitute for building purposes, such as being low in porosity, no disintegration, great crushing strength, improvement with age, absolute uniformity in size, two sides a finished face brick, no heat or cold conductivity, and can be made in colors to suit all requirements. The original color, resembling Indiana limestone (or sandstone), which were used exclusively in the building at St. Adresse, near Harve, in which the Belgian Minister of State has his offices, are in great demand.

The call for sand-lime brick has gone beyond the most sanguine expectations of the manufacturers. The product is the nearest perfect of all material. This has been brought about largely by the Sand-Lime Brick Association, which hold an annual convention at some city in Canada or the United States yearly, where brick manufacture is discussed in all its aspects and everybody who has suggestions to offer on brick making do so at the round-table talks. It is essential that every brick manufacturer of sand-lime brick should be there for an interchange of ideas and suggestions.

The United States Government sends W. E. Emley, of the Department of Commerce and Labor and Bureau of Standards, every year. He always reads a very valuable paper and answers all inquiries on tests made. I think that it was from his report of a year ago that we find the United States output of sand-lime brick was 174,361,000 brick.

There are now some 105 sand-lime brick yards operating in America. Architects are fast changing their views regarding these brick and are specifying them, not for backing up purposes, but for face-brick work. Contractors want them because of

their absolute uniformity and freedom from warp. They are also easier to lay and require a good deal less mortar, and finally they are easier to handle.

The Chinese have recently put in a sand-lime brick plant, showing the up-to-dateness of this race and people, who ages ago built the great Chinese wall, 22 feet high and over 12 miles long, taking millions of men 10 years to complete the same.

The sand-lime brick industry in Canada is still in its infancy, but are made in Quebec, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia, and had the present times even been normal we would have seen many new plants installed this year.

One of the most important points in the manufacture of sand-lime brick is the securing of a good silicate sand; having this, then procure a suitable calcium lime (magnesia lime is poor, harder to work, more difficult to mix and the bond is not so good; this applies to mortar also). Having found a suitable lime, it must be hydrated and pulverized very fine and then mixed in right proportions, usually about 6 per cent lime.

These brick are loaded on steel cars from the press as made and are run into long steel cylinders which are sealed up tight and subjected to a pressure of live steam of 125 pounds for 10 hours. Great care must be taken to keep this steam at an even temperature throughout to obtain a uniform color and hardness. These brick when cooled are ready for use.

A. F. KEMPF PASSES AWAY AT BUFFALO.

Andrew F. Kempf, manager of sales of the Buffalo Sand-Stone Brick Co., Buffalo, N. Y., died suddenly on Saturday, Feb. 7, 1915. Mr. Kempf had a very wide acquaintance throughout the entire Buffalo district and made a very good record as a salesman of sand-lime brick. He had a pleasing personality and was one of those men who loved work as well as he loved to eat.

Mr. Kempf has been present and participated in several of the annual meetings of the Sand-Lime Brick Association. He was a young man, born and raised in Buffalo, and seemed to have prospects for a very bright and prosperous business career.

PURCHASE PLANT SITE.

The Hooper Limestone Co., of Chattanooga, Tenn., has purchased for \$10,000 a tract of eight and one-half acres of limestone upon which its plant is located. For several years the business was operated on leased land. The company is owner of about 40 acres of land on the N. C. & St. L. railroad, but had all of its improvements upon the small tract just purchased as the property was originally opened up by the Rev. William E. Thompson. The company has about \$40,000 invested in plant and machinery on the premises, according to J. C. Sproat, manager. Mr. Sproat is contemplating a number of improvements and enlargements.

Rapides Gravel Co., of Woodworth, La., (Geo. K. Force, manager, Alexandria, La.) will develop a large gravel deposit near Woodworth.

W. J. Timberman, of Manhattan, N. Y., is trying to get permission from the town to establish a gravel plant at Port Washington, N. Y.

From the Sand-Lime Brick Centers.

Winnipeg, Can., March 15.—The Birds Hill Sandstone Brick Co. reports that business is very quiet at present.

Bridgeton, N. J., March 6.—The Penbryn Brick Co. reports that business has been rather dull with them since last April, but that prospects are looking brighter.

Buffalo, N. Y., March 15.—The Buffalo Sandstone Brick Co. reports that business is quiet, but that they have hope for a good business this spring.

Milwaukee, Wis., March 11.—The Acme Brick & Sand Co. states that prospects for a good business are in sight and that they expect to be busy during the coming season.

SAND-LIME BRICK PLANT PLANS READY.

The present plans of the promoters of the new brick plant which will be erected at Hortonville, Wis., near Appleton, by the United States Perfection Sand-Lime Brick Co., are that work on the plant will be started soon. Practically all the required \$41,000 capital has been secured. It is said that the proposed plant will have a daily capacity of 40,000 ordinary and 10,000 enameled brick, or nearly 15,000,000 a year. It is planned to establish a branch office of the concern at Appleton, Wis.

RECENT INCORPORATIONS.

Tomahawk Crushed Rock & Gravel Co., Tomahawk, Wis.; \$10,000 capital; C. H. Gundy, E. D. Foster and H. G. Foster.

Burlington Sand & Gravel Co., Burlington, Wis.; \$25,000 capital; Joseph A., John B. and Joseph L. Yanny.

Altamaha Sand & Gravel Co., care of M. A. Bake, Austell building, Atlanta, Ga.; \$50,000.

Maurice Deutsch, 50 Church street, New York City; authorized to do business as the Ajax Sand & Gravel Co.

Round Top Glass Sand Co., Hancock, Md.; \$40,000 capital; to manufacture sand for various purposes and will open and develop 127 acres of land near Hancock; output of 200 tons daily; J. Clarence Lane, 81 W. Washington street, Hagerstown, Md., manager.

Silver Spring Gravel & Rock Co., care of Henry P. Lambrecht, Green Bay rd., Milwaukee, Wis.; \$10,000 capital; Henry M. Lambrecht.

Seyern Gravel and Sand Corporation, 923 Fidelity building, Baltimore, Md.; \$70,000 capital; Claude L. Hammond, Joseph T. Nossel and J. Leiper Winslow, attorney, 913 Munsey building, Baltimore.

Sunrise Rock & Gravel Co., Houston, Tex.; \$10,000 capital; Harry & Thomas Pennington and J. E. Sieber, of Houston.

The Laker-Copper Sand & Gravel Co., Madison, Ia.; \$50,000 capital.

Laker-Copper Sand & Gravel Co., Madison, Ia.; capital \$50,000.

American-Japanese Silica Co., care of Noah Shakespeare, 2711 Wetmore avenue, attorney, Everett, Wash.; \$1,000,000 capital; Lucian F. McConihe, Sr., Earl W. Husted and S. Sato.

The Round Top Glass Co., which was recently organized in Hagerstown, Md., has acquired a considerable tract near Hancock, Md., and will produce sand for the manufacture of glass. The officers of the company are: President, Col. William P. Lane; vice-president, F. Wilbur Bridges; secretary, Levin Stonebraker; treasurer and general manager, J. Clarence Lane. The board of directors are: Col. William P. Lane, Clinton B. Grove, F. Wilbur Bridges, Levin Stonebraker and J. Clarence Lane.

CLAY PRODUCTS

Kansas City Brick.

The Hydraulic-Press Brick Co. announces the sale of 60,000 Hy-tex mats for the new high school building at Marceline, Mo.; 20,000 Hy-namel for the interior of the Junge Baking Co. building, Joplin, Mo.; 35,000 Hy-tex light ivory mats for the United States postoffice building, Winfield, Kan.; 35,000 Hy-tex face brick for the John I. Glover building, Eighth and Wyandotte streets, Kansas City, Mo.; 18,000 Hy-tex mats for the B. F. Herr residence, Kansas City, Mo.; 20,000 Hy-tex buff brick for Bruce Dodson's building, Twenty-eighth and Wyandotte streets, Kansas City, Mo.

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San Francisco Clay Notes.

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The United Materials Co., of San Francisco, has secured the California rights for manufacturing the rug brick specialties of the Hocking Valley Products Co. The rug brick will be manufactured at the plants of the Los Angeles Pressed Brick Co. at Richmond and Los Angeles, Cal.

Gladding, McBean & Co., brick and terra cotta manufacturers of San Francisco and Lincoln, Cal., have secured the contract for the structural terra cotta for the Mission branch library building in this city. The value of the contract is \$9,200.

BRICK MARKET STRENGTHENING.

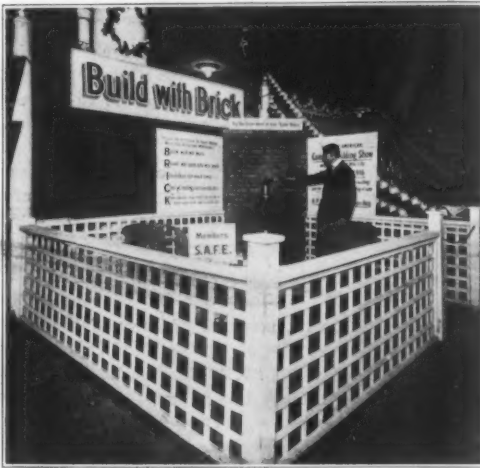
New York, March 17.—Hudson river common brick is again coming into this market. Prices, however, are strengthening and probably by the

time this report is published quotations will be nearer \$6.00 than \$5.75 now ruling. Unloading of barges to dealer's stacks and jobs has been more active, although it is still below normal, indicating that while there is a large volume of new building plans being filed, new construction work within the city proper is still retarded by tightness of money. Raritan brick coming in from Matawan and Sayreville is bringing close to \$6.00, but prices are likely to be higher before the season is well established.

Common Brick on Display.

"Try this experiment on your frame house."

That was the invitation given visitors to the American Woman's Exposition, held in Cleveland, March 8 to 13, where the common brick manufacturers made a demonstration of the fire resistance of their material. A small brick wall was erected in the brick booth and throughout the hours of the exposition a plumbers' blow torch played a flame upon it. Directly above the wall was a sign with



BRICK DISPLAY AT AMERICAN WOMEN'S EXPOSITION, CLEVELAND, MARCH 8-13.

the suggestion, "Try this experiment on your frame house."

There were other suitable legends to attract the attention of the exposition visitors, all driving home the gospel of safe building.

An attractive folder showing a small brick house with floor plans and giving its actual cost was distributed. The names of all visitors who are interested in building were taken by a young man in charge of the display and these have been turned over to the Cleveland local of the S. A. F. E., which will follow them up with literature and direct advertising until each one is convinced that it is best and cheapest to build with fire-safe materials.

The Cleveland brick manufacturing firms responsible for the exhibit are: Farr Brick Co., Barkwell Brick Co. and the American Building Brick Co.

The Eldred Brick Works, of Eldred, Pa., voted recently to return all money that had been paid it from that town. It found that there was about \$15,000 available on the \$30,000 necessary to establish the proposed plant in Eldred.

The Cumberland Brick Co., of Cumberland, Md., has closed a contract for machinery to manufacture paving blocks and face brick. The improvements to its plant will cost \$75,000.

Neutrality and "Safety First."

The trade supplied by the Arkansas Brick and Manufacturing Co., of Little Rock, Ark., is being reminded that this country is neutral and that Old Glory stands for "peace and plenty." W. W. Dickinson, president of the company, believes firmly in the country's perpetuity and the "safety first" idea. In a letter recently sent to friends, he said:

The neutrality of our country has been accepted by all nations. Our flag is an emblem of "peace and plenty," and is respected wherever it floats. Even England has recognized "safety first" and hoisted it in time of danger. Our president has steered us clear of "breakers" by his wise and conservative policy. Then why should we worry? We have already wasted too much time discussing other people's troubles. Let us rather think of our blessings; of the vast undeveloped resources of this great country which lie dormant awaiting our activity. Taxes and the "iron yoke of oppression" will drive great numbers to our shores and we should be prepared to take care of them when they come. They will require land to cultivate and houses to live in. Let those who have surplus money bring it from its hiding places, buy land and build homes for the great multitudes who are now only waiting for a chance to come. Surplus idle money is a curse. It was not issued to be hoarded. Put it to work so that its purpose may be utilized, labor rewarded, and thousands who are now idle may be made comfortable and happy.

Stop talking war—our president will take care of that—get busy—build now—build substantially—BUILD WITH BRICK.

BUYS SITE FOR BRICK PLANT.

J. W. Hamilton, trustee of the United States Perfection Lime Brick Co., of Chicago, has purchased 110 acres of land at Hortonville, near Appleton, Wis., to be used as a site for the erection of a plant for the manufacture of sand-lime brick. A. C. Weis, who invented the process used by the company, says that from \$85,000 to \$100,000 will be invested in the project and that the capacity of the plant will be 12,000,000 brick per year. It is hoped to have the plant in operation about April 1. Appleton will be the headquarters of the company, it is understood.

OMAHA FIRMS REBUILD PLANTS.

Omaha, Neb., March 19.—The Smith Brick Co., of Omaha, Neb., has rebuilt its plant which was recently destroyed by fire. The new plant is a duplicate of the old one and is now ready to begin operations.

The Omaha Clay Works has rebuilt its plant and is now operating. The plant has sold all the brick that they had on hand. A new dryer and many new cars have been added to the equipment and they are anxious to begin operations.

NEW ORLEANS BRICK MAKER DIES.

Albert Baldwin, Jr., secretary of the Salmen Brick and Lumber Co., New Orleans, La., passed away last week.

It is thought that a large brick plant will be erected at Quakertown, Pa., due to the fact that the Bethlehem Steel Co. recently purchased 215 acres of ground in that vicinity. Holtz and Anders, real estate agents, sold to A. D. Mitchell, real estate agent of the steel company, the farm of 90 acres belonging to Samuel Bergstresser for \$4,000. Charles Ridenauer sold 125 acres of his land to the company for the sum of \$5,000. The land lies close to the North Penn Railroad and is very low. It contains an abundance of brick clay of a very fine quality. It is said that adjoining farms will be purchased by the steel company.

Clay News in Brief.

The Nebo Clay Co., which is composed of capitalists of Connellsville, Pa., and Mill Run, Pa., has opened two new mines in the Indian Creek Valley, one at Nebo, Pa., and the other at Jones' Mill, Pa.

The Kane Brick Co., of Kane, Pa., received the largest order in its history last week. It came from a New York City firm and calls for a delivery at Baltimore, Md., of 400,000 brick. This insures a steady operation of the plant for three months.

The Freeport Clay Products and Material Co., of Freeport, O., elected the following directors for the ensuing year: T. O. Jones, J. H. Oppenheimer, Jos. A. Gravatt, T. N. Bummert and A. L. Chapman of Tarentum, S. D. Feeling of Marwood. The plant will resume operations March 1.

The Bureau of Smoke Regulation of the city of Pittsburgh has recommended many changes in the stacks of the brick kilns in this city. A series of tests and observations have been made showing that the amount of smoke from the kilns can be greatly reduced. J. W. Henderson is chief of the Bureau.

The A. Kaul Clay Manufacturing Co. and the Stratton Fire Clay Co., of Toronto, O., are still operating and paying \$2.00 a day for common labor. Other plants in that town are all down at the present, it is reported.

The Bloomsburg Brick Co. resumed operations at its plant at Bloomsburg, Pa., on January 14. The plant has been idle since it was burned on September 8 last year, but it is expected that it will run full handed from now on.

The Vesper Brick & Tile Co., Vesper, Wis., incorporated last summer with a capital stock of \$25,000, is erecting a new kiln with a capacity of 90,000 bricks per week. Other improvements, including the erection of an office building, will be made.

In order to increase the output of their plant in Allentown, Pa., the Ochse & Fry Brick Co., through their manager, Stephen Koller, have drawn up an agreement with the Dech, Huber and Kichline estates, on which there is much valuable brick clay, for the use of their properties for 15 years. The veins of clay run from 6 to 12 feet in depth, which, it is estimated, is sufficient to manufacture approximately 150 to 200 million brick. Modern kilns, large enough to take care of the increased capacity, will be erected. They will also install a new engine with increased horsepower, together with other new machinery. A mile or more of track will be laid from the crusher to the clay pit, upon which the clay will be hauled in by electric engine and cars, doing away with the horse and cart.

The Queen's Run Fire Brick Co., of Avis, Pa., has increased its capital from \$250,000 to \$500,000.

The American Sewer Pipe Co. has started work on a three-story addition to its plant just east of Lisbon, O.

The Acme Brick Co., of Marietta, O., has elected the following officers for this year: E. Clark, Jr., president; A. L. Gracey, vice president; W. H. H. Jett, treasurer and general manager, and John Kaiser, secretary.

The Municipal Shale Brick Co., capital \$250,000, has been organized at Martinsburg, W. Va., with A. B. Noll of that place as manager. It will build a plant to cost about \$200,000.

The Youngstown Clay Products Co., capital \$50,000, has been organized at Youngstown, Ohio, to manufacture brick, tile and other clay products. The incorporators are: John B. Malloy, H. T. McCartney, J. Boshim, W. Wright and J. A. Logan.

Edmonton's New Business Block.

One of the largest business blocks erected outside of Winnipeg has just been completed at Edmonton, Canada, and is known as the McLeod block. It was built by Messrs. Olsen & Johnson and has a frontage of 118 feet by 100 feet. It is nine full

stories in height, including basement and attic, the height from street level to the roof being 115 feet. The building is entirely fireproof. The outside finish is in cream brick and plain terra-cotta, with half cornice over the eighth story and full cornice over all. The entire cost of the building is approximately \$600,000.

There are 19 offices on each of the eight upper floors, making 152 in the building. All floors are of terrazzo. The corridors are seven feet in width, and the ceilings, 9 feet 10 inches in height. The corridors are wainscoted to the height of the doors with English vein Italian marble.

The building is of steel frame, fire-proofed with concrete. All structural steel members are encased in not less than two inches of concrete in the thin-



M'LEOD BLOCK, EDMONTON. COST OF CONSTRUCTION \$600,000.

nest place. All partitions are of 4-inch hollow tile. The basement has a 10-foot ceiling, with concrete floor and plaster finished walls.

OUR BUSINESS RELATIONS WITH FOREIGN COUNTRIES.

(Continued from Page 43.)

to where they were in July, and that, pursuant to that, he was going to South America to invest and to develop there a business which he would have felt warranted in doing in the spring.

Factories and Working Forces Being Destroyed.

They are destroying the factories. If you doubt it, remember that when you hear of a bombardment of Lille, Liege, Roubaix, Mauberge and of Mulhausen, these are the great industrial towns, full of factories, and that to a large degree they have been physically destroyed. In the next place they are destroying their capital and laying up a burden, not only of debt but of interest such as they have not been at all familiar with for years past. Finally, they are destroying their working force, which I think is the worst of all, for you and I know, as manufacturers, that the thing upon which we must depend to a large degree is the continuity of our operation by our trained men. These men—the men from 22 to 40 years of age, in their most productive years—are the men that are being killed off. You have not here such a condition as appeared in former wars, but a much more serious one from its industrial standpoint.

In the meantime we stand with our resources untouched. The eyes of the world turn to us for help in credit, for help in goods, and with every material resource of our nation and every moral resource and every financial resource, thank God, and every human resource greater, not less, than it has ever been before.

It was inevitable that we should feel the shock. We couldn't any more help feeling the shock than you could were a surgeon to operate on you, but though you know you are going to feel the shock of the operation you would go so far, were you in disease, to welcome that operation, knowing that the result would be the establishment of health. So in the existence of shock, there is no necessary harm: it is an unpleasant thing, but the best augury for the future of the United States is the difference in her attitude towards the world and the world's attitude toward her in February, 1915, as compared with August, 1914—the very difference in the situation in which we stand.

Friendly with Every European Power.

The fact that I can stand before you and tell you these plain things, which I would not have dared say or prophesy in July last, is itself the best promise of what the United States may be and become if she keeps her head.

Now, as to keeping her head. You hear all sorts of talk about foreign complications, and on that subject while I have no official message there are again certain fundamental things, not the superficial things, which I am sure will suggest themselves to you. Foreign complications? Is it likely from the foreign side, that the nations of the world who look to us now for credit and for goods are going to quarrel with us if they can avoid it? Where else will they go? Suppose we got into some foreign difficulty—whether would the world turn for its supplies of credit and of goods? Do you suppose that any of the belligerent powers, all of them our friends—for you remember we have in our keeping officially their affairs abroad—do you suppose that any of them are going to quarrel with their source of supply if they can help it? It doesn't seem to me reasonable that that would be so.

It does not seem to me that they will seek means and methods of differences with the one great people known to be friendly and to whom they look for practical business help in their need. Upon the domestic side, men must be strangely left to themselves and detached from all their average intellectual processes who would quarrel, if they could help it, with their own best customers. It would be a singular thing, almost an insane thing, if we, with this world's opportunity before us now, ventured to quarrel with the very people who bring us that opportunity. The nations, about whom the press talks with an exuberant freedom which is perhaps not always wise, respecting foreign complications, are our best customers; we are selling them hundreds of thousands of dollars' worth of goods every hour of every business day. That is the big fact—the fact that they need our goods of all kinds, food, shoes, cotton, everything else, the fact that they need them and can get them nowhere else, and the fact that we need them is a second big fact. Both of those facts are bigger than any of the little facts that float around on the surface of things.

It is a very easy thing to fill the columns of the press with excited, hysterical remarks as to complications of all sorts, and I venture to think that not one of you have ever seen in any news article the basic facts of their need of us and our need of them which I have just told you and which you know from my simple statement of them to be as large and controlling as they are invisible.

Gentlemen, where would the cotton mills of Lancashire get the cotton were the course of European commerce interrupted? And do not the mills of Lancashire need cotton? Where would the industries of the continent in all the nations get their supplies if Atlantic commerce was interrupted? And do not they need the supplies? Where would the nations get the millions of things they are buying from us now and which they sorely need if not from us? And are they going to abandon their common sense? Not they, when they need us so much.

I have not, in the background of my mind, any official facts from which I am speaking with a careful effort to say as little definite as possible; I am simply looking at it as a business man—looking at the big facts of the situation—that we are the needed people in this world now and are necessary to the world as we have never been necessary before, and the world is not going to get in trouble with us if it can help it, and it takes two people to quarrel, and we won't.

Reversed Our Attitude to World.

So the bugaboo which, if it existed, would be a real bogie against which you'd have a hard game to play; the bugaboo of foreign complications may be fairly forgotten by American business men today and we may look forward, you and I, to a steady, quiet development. If you look back seven months you will see that there has been a good deal of development already. We have reversed our whole attitude to the world, as I have said, in that time. We occupy a stronger position in the world.

We Need Confidence in Ourselves.

Now, what we want to get hold of is confidence in ourselves, in our future, and get rid of ghosts and get on our jobs and get busy at them. It ought not to surprise you if it is taking us a little time for convalescence. A man who has had his leg cut off or who has had an operation for appendicitis does not get up the next week and walk around; he does not play football the second week; he does not go on long walking tours the third week; it takes time to recover. You and I have had an awful shock when the whole system of industry, finance and business broke down and we were alone to take the waves of passion and of destruction that broke all about the base on which our nation stands. It was a big shock. But things were suffered in August and September and endured, but now we can all see that's gone and we breathe easier, our lungs are expanded, our heads are getting clearer, we know we are safe. The period of convalescence is well advanced and there remains few things in our way.

Government by suspicion is a gross mistake; the government by suspicion does not exist any longer, and men must not be any more suspicious that it does exist than we would be right to have it exist. I think the day of government by suspicion is over. Furthermore, we have got to learn in our shops, in our offices, in Washington, as well as with you, that distrust is not a constructive force, that nothing is to be made out of it permanently. It is a certain sign of boyish imitation of man's wisdom to be distrustful. We sometimes call it acuteness and think it rather clever to distrust our fellows and to doubt their motives and their purposes, but if distrust ever got abroad in this country very, very widely, I don't know anything that would do more to break us down. We must get rid of it.

I have said that I sometimes wish that more business men would do as you have done, done here, see what we have got, talk with Dr. Stratton; come down, see me, ask questions about your own business, as to what we are carrying on. If you think there is reason for distrust of what is going on, come and ask about it. We have suffered terribly in America from the bad habit of criticizing first and finding facts second, and we ought to get over it. The last word I want to leave with you is this: The Department of Commerce is here to serve the business of this country; that is all it is for. If it fails in that job, it is a worthless kind of a failure; if it succeeds in that job, it is the highest kind of success. We don't know if all, we don't know perhaps anything like as much as we ought to know, but we would love to know how we can serve commerce better; our whole purpose and existence is to help the business man along. In this special service here (Bureau of Standards) and in the seven other services that form the department, we want to be a practical force for American commerce, not to carry our political policies. We are here so that the American business man may have information, may have encouragement, may have power. We will do anything that is within our lawful power to do and within the means made available to us, to help business men along and we want to know how we can be of more service to them.

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N. Clark & Sons, of San Francisco, is shipping terra cotta from its local plant for the Couch school building at Portland, Ore.

The United Materials Co., of San Francisco, has secured the California rights for manufacturing the rug brick specialties of the Hocking Valley Products Co. The rug brick will be manufactured at the plants of the Los Angeles Pressed Brick Co. at Richmond and Los Angeles, Cal.

Gladding, McBean & Co., brick and terra cotta manufacturers of San Francisco and Lincoln, Cal., have secured the contract for the structural terra cotta for the Mission branch library building in this city. The value of the contract is \$9,200.

BRICK MARKET STRENGTHENING.

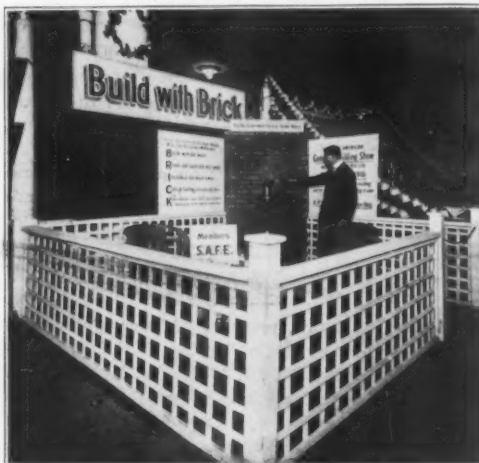
New York, March 17.—Hudson river common brick is again coming into this market. Prices, however, are strengthening and probably by the

time this report is published quotations will be nearer \$6.00 than \$5.75 now ruling. Unloading of barges to dealer's stacks and jobs has been more active, although it is still below normal, indicating that while there is a large volume of new building plans being filed, new construction work within the city proper is still retarded by tightness of money. Raritan brick coming in from Matawan and Sayreville is bringing close to \$6.00, but prices are likely to be higher before the season is well established.

Common Brick on Display.

"Try this experiment on your frame house."

That was the invitation given visitors to the American Woman's Exposition, held in Cleveland, March 8 to 13, where the common brick manufacturers made a demonstration of the fire resistance of their material. A small brick wall was erected in the brick booth and throughout the hours of the exposition a plumbers' blow torch played a flame upon it. Directly above the wall was a sign with



BRICK DISPLAY AT AMERICAN WOMEN'S EXPOSITION, CLEVELAND, MARCH 8-13.

the suggestion, "Try this experiment on your frame house."

There were other suitable legends to attract the attention of the exposition visitors, all driving home the gospel of safe building.

An attractive folder showing a small brick house with floor plans and giving its actual cost was distributed. The names of all visitors who are interested in building were taken by a young man in charge of the display and these have been turned over to the Cleveland local of the S. A. F. E., which will follow them up with literature and direct advertising until each one is convinced that it is best and cheapest to build with fire-safe materials.

The Cleveland brick manufacturing firms responsible for the exhibit are: Farr Brick Co., Barkwell Brick Co. and the American Building Brick Co.

The Eldred Brick Works, of Eldred, Pa., voted recently to return all money that had been paid it from that town. It found that there was about \$15,000 available on the \$30,000 necessary to establish the proposed plant in Eldred.

The Cumberland Brick Co., of Cumberland, Md., has closed a contract for machinery to manufacture paving blocks and face brick. The improvements to its plant will cost \$75,000.

Neutrality and "Safety First."

The trade supplied by the Arkansas Brick and Manufacturing Co., of Little Rock, Ark., is being reminded that this country is neutral and that Old Glory stands for "peace and plenty." W. W. Dickinson, president of the company, believes firmly in the country's perpetuity and the "safety first" idea. In a letter recently sent to friends, he said:

The neutrality of our country has been accepted by all nations. Our flag is an emblem of "peace and plenty," and is respected wherever it floats. Even England has recognized "safety first" and hoisted it in time of danger. Our president has steered us clear of "breakers" by his wise and conservative policy. Then why should we worry? We have already wasted too much time discussing other people's troubles. Let us rather think of our blessings; of the vast undeveloped resources of this great country which lie dormant awaiting our activity. Taxes and the "iron yoke of oppression" will drive great numbers to our shores and we should be prepared to take care of them when they come. They will require land to cultivate and houses to live in. Let those who have surplus money bring it from its hiding places, buy land and build homes for the great multitudes who are now only waiting for a chance to come. Surplus idle money is a curse. It was not issued to be hoarded. Put it to work so that its purpose may be utilized, labor rewarded, and thousands who are now idle may be made comfortable and happy.

Stop talking war—our president will take care of that—get busy—build now—build substantially—BUILD WITH BRICK.

BUYS SITE FOR BRICK PLANT.

J. W. Hamilton, trustee of the United States Perfection Lime Brick Co., of Chicago, has purchased 110 acres of land at Hortonville, near Appleton, Wis., to be used as a site for the erection of a plant for the manufacture of sand-lime brick. A. C. Weis, who invented the process used by the company, says that from \$85,000 to \$100,000 will be invested in the project and that the capacity of the plant will be 12,000,000 brick per year. It is hoped to have the plant in operation about April 1. Appleton will be the headquarters of the company, it is understood.

OMAHA FIRMS REBUILD PLANTS.

Omaha, Neb., March 19.—The Smith Brick Co., of Omaha, Neb., has rebuilt its plant which was recently destroyed by fire. The new plant is a duplicate of the old one and is now ready to begin operations.

The Omaha Clay Works has rebuilt its plant and is now operating. The plant has sold all the brick that they had on hand. A new dryer and many new cars have been added to the equipment and they are anxious to begin operations.

NEW ORLEANS BRICK MAKER DIES.

Albert Baldwin, Jr., secretary of the Salmen Brick and Lumber Co., New Orleans, La., passed away last week.

It is thought that a large brick plant will be erected at Quakertown, Pa., due to the fact that the Bethlehem Steel Co. recently purchased 215 acres of ground in that vicinity. Holtz and Anders, real estate agents, sold to A. D. Mitchell, real estate agent of the steel company, the farm of 90 acres belonging to Samuel Bergstresser for \$4,000. Charles Ridenauer sold 125 acres of his land to the company for the sum of \$5,000. The land lies close to the North Penn Railroad and is very low. It contains an abundance of brick clay of a very fine quality. It is said that adjoining farms will be purchased by the steel company.

Clay News in Brief.

The Nebo Clay Co., which is composed of capitalists of Connellsville, Pa., and Mill Run, Pa., has opened two new mines in the Indian Creek Valley, one at Nebo, Pa., and the other at Jones' Mill, Pa.

The Kane Brick Co., of Kane, Pa., received the largest order in its history last week. It came from a New York City firm and calls for a delivery at Baltimore, Md., of 400,000 brick. This insures a steady operation of the plant for three months.

The Freeport Clay Products and Material Co., of Freeport, O., elected the following directors for the ensuing year: T. O. Jones, J. H. Oppenheimer, Jos. A. Gravatt, T. N. Bummert and A. L. Chapman of Tarentum, S. D. Feeling of Marwood. The plant will resume operations March 1.

The Bureau of Smoke Regulation of the city of Pittsburgh has recommended many changes in the stacks of the brick kilns in this city. A series of tests and observations have been made showing that the amount of smoke from the kilns can be greatly reduced. J. W. Henderson is chief of the Bureau.

The A. Kaul Clay Manufacturing Co. and the Stratton Fire Clay Co., of Toronto, O., are still operating and paying \$2.00 a day for common labor. Other plants in that town are all down at the present, it is reported.

The Bloomsburg Brick Co. resumed operations at its plant at Bloomsburg, Pa., on January 14. The plant has been idle since it was burned on September 8 last year, but it is expected that it will run full handed from now on.

The Vesper Brick & Tile Co., Vesper, Wis., incorporated last summer with a capital stock of \$25,000, is erecting a new kiln with a capacity of 90,000 bricks per week. Other improvements, including the erection of an office building, will be made.

In order to increase the output of their plant in Allentown, Pa., the Oches & Fry Brick Co., through their manager, Stephen Koller, have drawn up an agreement with the Dech, Huber and Kichline estates, on which there is much valuable brick clay, for the use of their properties for 15 years. The veins of clay run from 6 to 12 feet in depth, which, it is estimated, is sufficient to manufacture approximately 150 to 200 million brick. Modern kilns, large enough to take care of the increased capacity, will be erected. They will also install a new engine with increased horsepower, together with other new machinery. A mile or more of track will be laid from the crusher to the clay pit, upon which the clay will be hauled in by electric engine and cars, doing away with the horse and cart.

The Queen's Run Fire Brick Co., of Avis, Pa., has increased its capital from \$250,000 to \$500,000.

The American Sewer Pipe Co. has started work on a three-story addition to its plant just east of Lisbon, O.

The Acme Brick Co., of Marietta, O., has elected the following officers for this year: E. Clark, Jr., president; A. L. Gracey, vice president; W. H. H. Jett, treasurer and general manager, and John Kaiser, secretary.

The Municipal Shale Brick Co., capital \$250,000, has been organized at Martinsburg, W. Va., with A. B. Noll of that place as manager. It will build a plant to cost about \$200,000.

The Youngstown Clay Products Co., capital \$50,000, has been organized at Youngstown, Ohio, to manufacture brick, tile and other clay products. The incorporators are: John B. Malloy, H. T. McCartney, J. Boshim, W. Wright and J. A. Logan.

Edmonton's New Business Block.

One of the largest business blocks erected outside of Winnipeg has just been completed at Edmonton, Canada, and is known as the McLeod block. It was built by Messrs. Olsen & Johnson and has a frontage of 118 feet by 100 feet. It is nine full

stories in height, including basement and attic, the height from street level to the roof being 115 feet. The building is entirely fireproof. The outside finish is in cream brick and plain terra-cotta, with half cornice over the eighth story and full cornice over all. The entire cost of the building is approximately \$600,000.

There are 19 offices on each of the eight upper floors, making 152 in the building. All floors are of terrazzo. The corridors are seven feet in width, and the ceilings, 9 feet 10 inches in height. The corridors are wainscoted to the height of the doors with English vein Italian marble.

The building is of steel frame, fire-proofed with concrete. All structural steel members are encased in not less than two inches of concrete in the thin-



MCLEOD BLOCK, EDMONTON. COST OF CONSTRUCTION \$600,000.

nest place. All partitions are of 4-inch hollow tile. The basement has a 10-foot ceiling, with concrete floor and plaster finished walls.

OUR BUSINESS RELATIONS WITH FOREIGN COUNTRIES.

(Continued from Page 43.)

to where they were in July, and that, pursuant to that, he was going to South America to invest and to develop there a business which he would have felt warranted in doing in the spring.

Factories and Working Forces Being Destroyed.

They are destroying the factories. If you doubt it, remember that when you hear of a bombardment of Lille, Liege, Roubaix, Maubeuge and of Mulhausen, those are the great industrial towns, full of factories, and that to a large degree they have been physically destroyed. In the next place they are destroying their capital and laying up a burden, not only of debt but of interest such as they have not been at all familiar with for years past. Finally, they are destroying their working force, which I think is the worst of all, for you and I know, as manufacturers, that the thing upon which we must depend to a large degree is the continuity of our operation by our trained men. These men—the men from 22 to 40 years of age, in their most productive years—are the men that are being killed off. You have not here such a condition as appeared in former wars, but a much more serious one from its industrial standpoint.

In the meantime we stand with our resources untouched. The eyes of the world turn to us for help in credit, for help in goods, and with every material resource of our nation and every moral resource and every financial resource, thank God, and every human resource greater, not less, than it has ever been before.

It was inevitable that we should feel the shock. We couldn't any more help feeling the shock than you could were a surgeon to operate on you, but though you know you are going to feel the shock of the operation you would go so far, were you in disease, to welcome that operation, knowing that the result would be the establishment of health. So in the existence of shock there is no necessary harm; it is an unpleasant thing, but the best augury for the future of the United States is the difference in her attitude towards the world and the world's attitude toward her in February, 1915, as compared with August, 1914—the very difference in the situation in which we stand.

Friendly with Every European Power.

The fact that I can stand before you and tell you these plain things, which I would not have dared say or prophesy in July last, is itself the best promise of what the United States may be and become if she keeps her head.

Now, as to keeping her head. You hear all sorts of talk about foreign complications, and on that subject while I have no official message there are again certain fundamental things, not the superficial things, which I am sure will suggest themselves to you. Foreign complications? Is it likely from the foreign side, that the nations of the world who look to us now for credit and for goods are going to quarrel with us if they can avoid it? Where else will they go? Suppose we got into some foreign difficulty—whether would the world turn for its supplies of credit and of goods? Do you suppose that any of the belligerent powers, all of them our friends—for you remember we have in our keeping officially their affairs abroad—do you suppose that any of them are going to quarrel with their source of supply if they can help it? It doesn't seem to me reasonable that that would be so.

It does not seem to me that they will seek means and methods of differences with the one great people known to be friendly and to whom they look for practical business help in their need. Upon the domestic side, men must be strangely left to themselves and detached from all their average intellectual processes who would quarrel, if they could help it, with their own best customers. It would be a singular thing, almost an insane thing, if we, with this world's opportunity before us now, ventured to quarrel with the very people who bring us that opportunity. The nations, about whom the press talks with an exuberant freedom which is perhaps not always wise, respecting foreign complications, are our best customers; we are selling them hundreds of thousands of dollars' worth of goods every hour of every business day. That is the big fact—the fact that they need our goods of all kinds, food, shoes, cotton, everything else, the fact that they need them and can get them nowhere else, and the fact that we need them is a second big fact. Both of those facts are bigger than any of the little facts that float around on the surface of things.

It is a very easy thing to fill the columns of the press with excited, hysterical remarks as to complications of all sorts, and I venture to think that not one of you have ever seen in any news article the basic facts of their need of us and our need of them which I have just told you and which you know from my simple statement of them to be as large and controlling as they are invisible.

Gentlemen, where would the cotton mills of Lancashire get the cotton were the course of European commerce interrupted? And do not the mills of Lancashire need cotton? Where would the industries of the continent in all the nations get their supplies if Atlantic commerce was interrupted? And do not they need the supplies? Where would the nations get the millions of things they are buying from us now and which they sorely need if not from us? And are they going to abandon their common sense? Not they, when they need us so much.

I have not, in the background of my mind, any official facts from which I am speaking with a careful effort to say as little definite as possible; I am simply looking at it as a business man—looking at the big facts of the situation—that we are the needed people in this world now and are necessary to the world as we have never been necessary before, and the world is not going to get in trouble with us if it can help it, and it takes two people to quarrel, and we won't.

Reversed Our Attitude to World.

So the bugaboo which, if it existed, would be a real bogie against which you'd have a hard game to play; the bugaboo of foreign complications may be fairly forgotten by American business men today and we may look toward you and I, to a steady, quiet development. If you look back seven months you will see that there has been a good deal of development already. We have reversed our whole attitude to the world, as I have said, in that time. We occupy a stronger position in the world.

We Need Confidence in Ourselves.

Now, what we want to get hold of is confidence in ourselves, in our future, and get rid of ghosts and get on our jobs and get busy at them. It ought not to surprise you if it is taking us a little time for convalescence. A man who has had his leg cut off or who has had an operation for appendicitis does not get up the next week and walk around; he does not play football the second week; he does not go on long walking tours the third week—it takes time to recover. You and I have had an awful shock when the whole system of industry, finance and business broke down and we were alone to take the waves of passion and of destruction that broke all about the base on which our nation stands. It was a big shock. But things were suffered in August and September and endured, but now we can all see that's gone and we breathe easier, our lungs are expanded, our heads are getting clearer, we know we are safe. The period of convalescence is well advanced and there remains few things in our way.

Government by suspicion is a gross mistake; the government by suspicion does not exist any longer, and men must not be any more suspicious that it does exist than we would be right to have it exist. I think the day of government by suspicion is over. Furthermore, we have got to learn in our shops, in our offices, in Washington, as well as with you, that distrust is not a constructive force, that nothing is to be made out of it permanently. It is a certain sign of boyish imitation of man's wisdom to be distrustful. We sometimes call it acuteness and think it rather clever to distrust our fellows and to doubt their motives and their purposes, but if distrust ever got abroad in this country very, very widely, I don't know anything that would do more to break us down. We must get rid of it.

I have said that I sometimes wish that more business men would do as you have done, done here, see what we have got, talk with Dr. Stratton; come down, see me, ask questions about your own business, as to what we are carrying on. If you think there is reason for distrust of what is going on, come and ask about it. We have suffered terribly in America from the bad habit of criticising first and finding facts second, and we ought to get over it. The last word I want to leave with you is this: the Department of Commerce is here to serve the business of this country; that is all it is for. If it fails in that job, it is a worthless kind of a failure; if it succeeds in that job, it is the highest kind of success. We don't know if all, we don't know perhaps anything like as much as we ought to know, but we would love to know how we can serve commerce better; our whole purpose and existence is to help the business man along. In this special service here (Bureau of Standards) and in the seven other services that form the department, we want to be a practical force for American commerce, not to carry our political policies. We are here so that the American business man may have information, may have encouragement, may have power. We will do anything that is within our lawful power to do and within the means made available to us, to help business men along and we want to know how we can be of more service to them.

GYPSUM PRODUCTS

Three New Uses of Gypsum

Investigations and experiments on the part of men engaged in the gypsum industry have brought forth recently three new uses of gypsum. One is the use of plaster board in a new method of constructing reinforced concrete floors. A second use is the inauguration of steel clips in connection with plaster board and channel iron for partition work, and the third involves the use of gypsum as a roofing material. In this connection regular gypsum block is used.

In the construction of concrete floors, plaster board is used to form domes and aids materially in the economical distribution of concrete in ribbed floor construction. The domes are made of waterproofed and reinforced plaster board, molded to the proper shape with a flat sheet of plaster board attached to the bottom to form a perfect soffit or plastering surface for the ceiling. The domes are designed for use in connection with reinforced concrete floors and to carry the wet load only until the concrete is set.

It is stated that the dome system is especially desirable to span distances of 13 feet or more under a light load. In buildings with light floor loads, such as hotels, hospitals, dwellings and public buildings, this type of construction is said to reduce the cost and decrease the load on columns, girders and foundations.

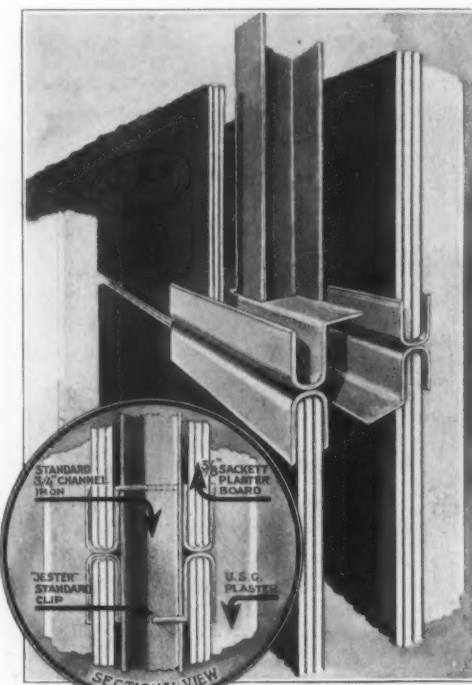
It is claimed that its use will permit long spans without intermediate beams, making a floor of great rigidity. Spans can therefore be made room width and flat ceilings can be obtained.

The striking feature of the plaster board dome system, however, is that it forms the voids so desirable in the floor construction work, permitting a thoroughly reinforced concrete floor construction of light weight.

One of the recent buildings in which the plaster board domes have been used is the Y. M. C. A. structure at Streator, Ill. In connection with this particular job, the architect says that he is highly pleased and that the system has proved very satisfactory. The general contractor and the contractor's superintendent emphasize the economy possible with the plaster board dome system. The plumber and the electrical contractor both claim that this system permits them to do neat and efficient work with rapidity. The electrical contractor says that he was able to pierce the domes without trouble

and place the electrical fixtures exactly as directed by the architect and that he was able to do the work quickly and keep out of the way of the concrete contractor.

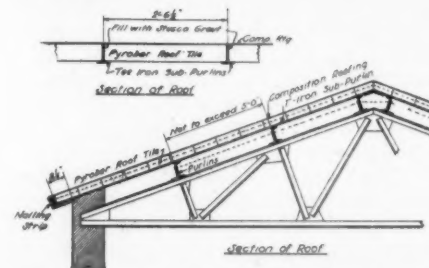
The use of galvanized metal clips in connection with one-quarter or three-eighths inch plaster board and common or standard three-quarter inch channel irons enables the construction of light weight and



USE OF PLASTER BOARD AND METAL CLIPS IN NEW HOLLOW PARTITION SYSTEM.

sound deadening partitions when coated on both sides with gypsum plaster. It is the invention of the metal clips that thus enables the formation of light weight walls. With the use of channel studs, carried in stock by most retail dealers, the clips lock the plaster board into the wall and secure a reinforced backing for the application of plaster.

Partition walls of this nature are speedily



TYPICAL APPLICATION OF A GYPSUM ROOF.

erected, the simplicity of the work enabling the mechanics to erect partitions in very little time. By placing three-quarter inch channel irons 24 $\frac{1}{2}$ -inch on centers and locking in between them solid sheets of 24-by-36-inch plaster board the work is completed, forming a solid surface for application of the wall plaster.

In addition to the clips used in this method a double clip has been invented which will permit the construction of a hollow partition, allowing an air space for pipes, conduits, etc. By the use of similar clips the gypsum plaster board is attached to ordinary channel irons and plastered over, forming a light weight suspended ceiling, developing more effective soundproofing and otherwise said to be superior to and more economical than other methods.

Stating that gypsum is inherently a most excellent roofing material, the promoters of gypsum for this purpose state that it will stand the most critical comparison with any other roofing material available today.

The gypsum tile roofing system consists of reinforced waterproofed gypsum tile manufactured and erected in such a manner as to give a light weight, fireproof, non-condensing roof deck. When erected according to proper methods and covered with five-ply composition roofing, it forms a light weight monolithic constructed roof easily applied. It is cheap in erection costs and materially reduces the amount of steel work in a building on account of its light load.

The gypsum roof tile are manufactured in three-inch solid thickness, 12 inches wide and 30 inches long, reinforced with special wire fabric. The tile are specially treated and waterproofed. The upper surface perfectly smooth and ready to receive the roof covering.

The tile are laid on T iron sub-purlins and the spaces between the tile above the flange of the T iron are filled with plaster grout, thoroughly binding the tile together and forming smooth monolithic surface for the application of roof covering.

The roof tile are fireproof and it is claimed they will not expand or contract at ordinary or extreme temperatures and will show no crushing, bulging or spalling effect when restrained or when water is applied. Therefore this system of roof covering will not be displaced by temporary changes.

The valuable feature in connection with the erection of gypsum roofing tile is that it can be installed entirely with common labor, minimizing time and cost. It is made in large units and can be easily cut and fitted. It is supported by steel purlins upon which it is laid, and no bolts, rivets or scaffolding is necessary for its erection. When placed upon two-and-one-half-inch T irons, it will carry 600 pounds per square foot ultimate dead load.



SECTIONAL VIEW OF THE PLASTER BOARD DOMES, SHOWING METHOD OF REINFORCING AND USE OF SPECIAL METAL CLIPS FOR ATTACHING SOFFIT PIECE.

Plaster Business Improving.

Louisville, Ky., March 18.—Clear, fine weather has started things moving to some extent in the wall plaster trade and it is generally felt certain that business will be humming by April 15. Collections are a little slow, as a rule, as the plasterers have not had any great amount of work to do during the winter and are therefore slow about paying for such plaster as is furnished to them direct.

W. P. Bannon, vice-president and general manager of the new Standard Wall Plaster Co., said that the plant was running a little better than half capacity and would be shoved up several notches between now and April 15. While local business is fairly good, Mr. Bannon said that he had a large quantity of out-of-town business in sight this season and expected to be very busy throughout the year.

J. B. Campbell, president of J. B. Campbell & Sons, owners of the Kentucky Plaster Co. and the

Southern Wall Plaster Co., said that the Kentucky plant was running full and the Southern plant would be started up about April 1. Prospects are better than for several months past.

Mr. Miller, of the American Cement Plaster Co., of Detroit, Mich., was recently in Louisville calling on the concerns handling builders' supplies.

Scott Burton, of Danville, Ky., a contractor and dealer in plaster, recently in Harrodsburg, Ky., where he went over the plans and specifications of the new A. D. Price memorial hospital, which is soon to be erected.

C. H. McNider, of Mason City, Iowa, and other men interested in the National Plaster Co., are now preparing in Kansas City, Mo., plans for the new company. The company is now doing business and there is considerable work in sight, with building operations opening strong for the spring.

SASKATCHEWAN ADVOCATING "BUILD NOW."

The contractors of Saskatchewan, Canada, are banding together with the idea of educating the people to the advantages of building when building is cheap. At the monthly meeting of the Saskatoon Builders' Exchange, held on March 6, a scheme was brought forward to encourage the members of the various builders' exchanges throughout Saskatchewan to "Build Now." It is believed that there are quite a number of towns in the province where financial conditions would justify them in erecting buildings and private residences, and the idea was to show them that now is the best time to go ahead with the work, when the cost of material and labor was less than it was in the "boom" days.

An Army that is Always Growing!



The Architects, Contractors and Plasterers appreciate the uniform excellence of U. S. G. materials. The Supply Merchants find a profitable advantage in the U. S. G. service behind the goods.

These are some of the reasons why this country is being plastered with the products of

United States Gypsum Co.

"World's Largest Makers of Gypsum Products"

New York Cleveland Chicago Minneapolis Kansas City San Francisco

Red, Brown, Buff and Black



**MORTAR
COLORS**

The Strongest and
Most Economical
in the Market.



Our Metallic Paints and Mortar Colors are unsurpassed in strength, fineness, and body, durability, covering power and permanency of color. Write for samples and quotations.

CHATTANOOGA PAINT CO.

Chattanooga, Tennessee

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS

WHEN YOU ABSOLUTELY KNOW THAT

Ricketson's Mortar Colors

are pure and brilliant in tone, economical in application and a permanent guarantee against fading and washing

Why not INSIST on having them?

They are the acknowledged best for all uses—Mortar, Brick, Cement, Concrete and stone. Red, Brown, Buff, Purple and Black.



RICKETSON MINERAL PAINT WORKS, MILWAUKEE, WIS.



M-O "43" 1 1/2-yd. Traction Shovel. Stone Quarry of John D. Owens & Son, Owens, Ohio.

STEAM SHOVELS**DIPPER DREDGES****BALLAST UNLOADERS****M-O "43" 1 1/2 Yd. Traction Shovel****Spur Gear Drive and Separate Steering Engine**

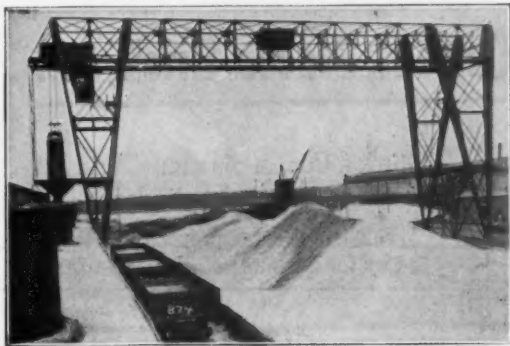
The Railroad Shovel is readily converted into a Traction shovel by removing the trucks, jacks, Couplers, air brakes, etc., and then bolting up underneath the frame, the forward and rear traction axles and the driving shafts. The steering engine is mounted on the floor at the extreme rear end of the shovel and is connected to a steering screw for slewing the rear axle. Power for driving is transmitted from the main engines by spur gearing direct to the traction wheels on the front axle, thus doing away entirely with the bothersome sprocket chains now employed for this purpose. The steering lever is placed within easy reach of the shovel runner, when in his usual position, so that he has full control of the steering and propelling movements.

THE MARION-OSGOOD COMPANY

Eastern Office:
51 STATE STREET, ALBANY, N. Y.
Cincinnati Agency, Thaw & Williams, 202 Bell Block

EXPORT OFFICE:
H. S. Johansen,
50 Church St., New York City.

Marion, Ohio, U. S. A.
Atlanta Agency, W. E. Austin Mckay Co., 2 Spring St.



Sand Handling Gantry Crane equipped with a man trolley, 4-line, two yard Clam Shell Bucket, and rigidly attached hopper to guide the material into the storage reservoirs.

You Can Reduce Your Handling Costs

by the use of proper equipment for your work, which should easily and economically handle the material it was designed to take care of. That is why the Edward Ford Plate Glass Company, of Toledo, O., chose a

"McMyler Interstate Gantry Crane"

to take care of unloading sand from cars to stock pile, and then to the mill, as same is needed.

The McMyler Interstate Co. Dept. P-3 Cleveland, Ohio

New York

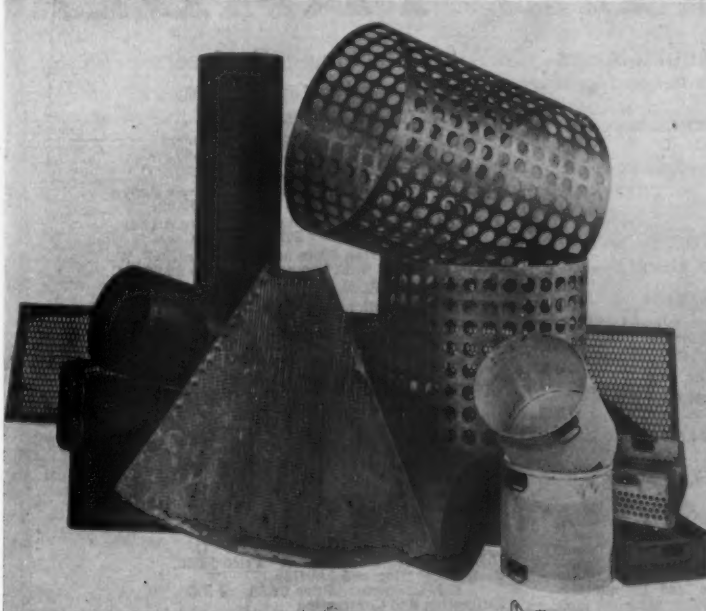
London

Chicago

PRODUCTS—Locomotive Cranes, All Type Buckets for every purpose—Elevating and Conveying Machinery, etc.

PERFORATED METAL

STEEL SCREENS :: IRON AND STEEL WORK



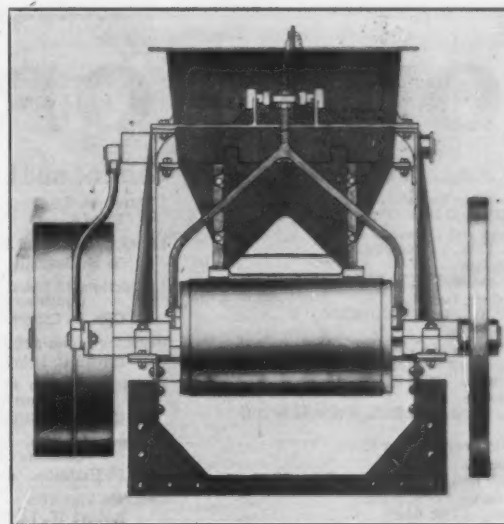
ELEVATOR BUCKETS, STEEL TANKS, ETC.

W. TOEPFER & SONS

ESTABLISHED 1855

183 Broadway

Milwaukee, Wis.



To weigh and regulate the flow of material traveling in a continuous stream over a conveyor.

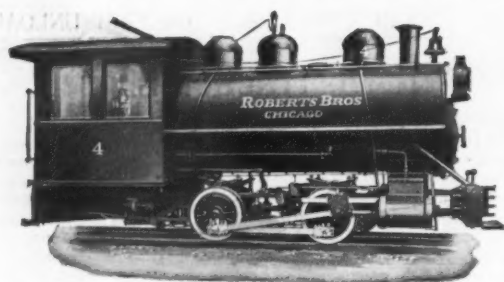
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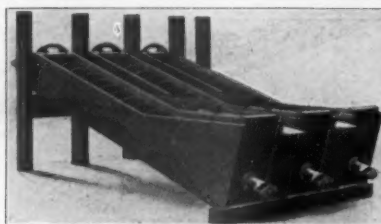
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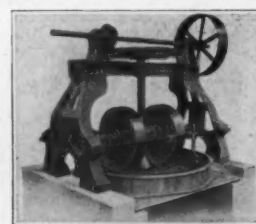


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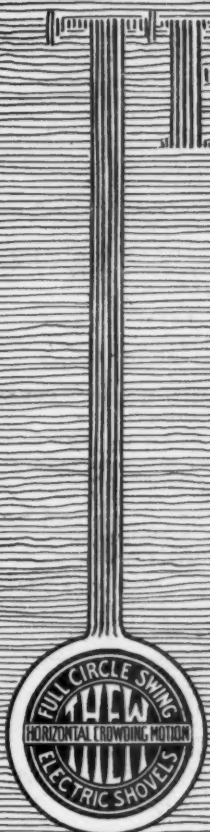
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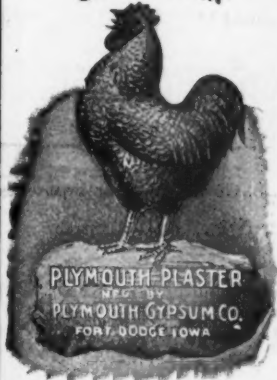
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More than 10% of all cement used in the United States is Lehigh

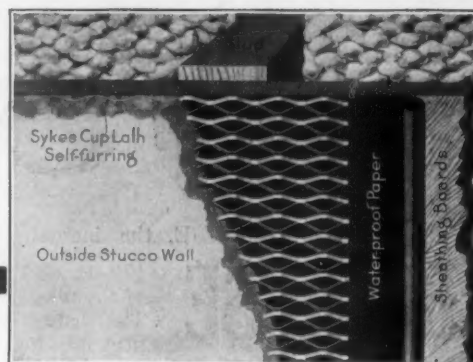


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Heavier—Stronger—Better

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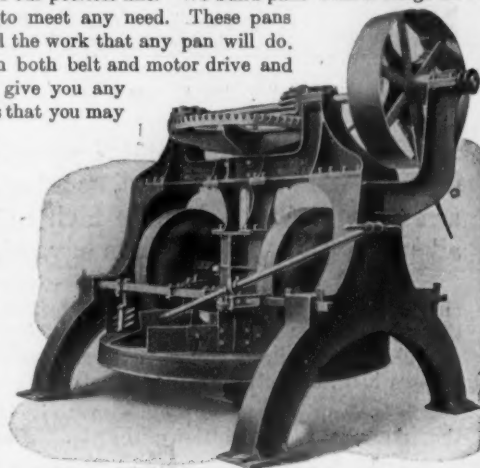
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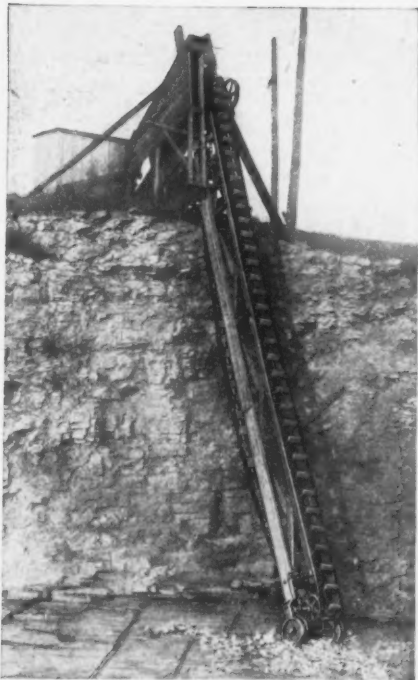


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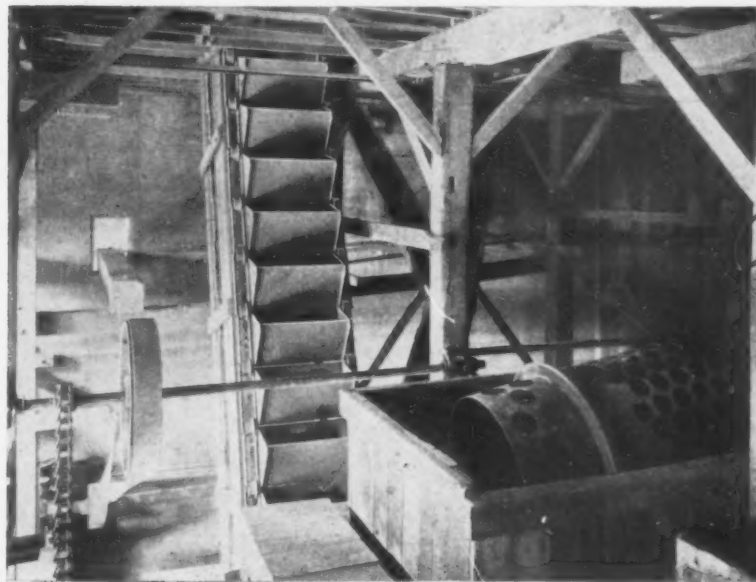
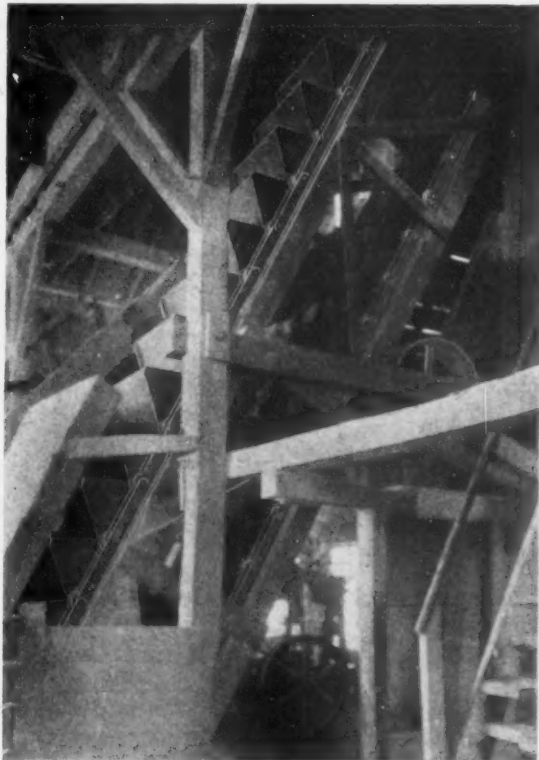
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